DOCUMENT RESUME

ED 409 689 EC 305 736

AUTHOR	Thorkildsen, Ron; And Others
TITLE	Interactive Videodisc Social Skills Program. Final Report.
INSTITUTION	Utah State Univ., Logan. Developmental Center for Handicapped Persons.
SPONS AGENCY	Special Education Programs (ED/OSERS), Washington, DC.
PUB DATE	84
NOTE	230p.
CONTRACT	G008101537
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	MF01/PC10 Plus Postage.
DESCRIPTORS	Audiovisual Aids; *Behavior Disorders; Body Language; *Educational Strategies; Elementary Education; *Interpersonal Competence; Lesson Plans; Peer Relationship; Program Effectiveness; Role Playing; Self Management; *Social Development; *Videodisks
IDENTIFIERS	*Social Skills Training

ABSTRACT

This report describes the outcomes of a federally funded project that developed an interactive videodisc social skills program and tested the effectiveness of the program on 30 children (grades 3-5) with behavior disorders. The program teaches children how to use appropriate tone of voice, phrasing, and body language in such social interactions as getting involved and being positive. The videodisc is used to present examples of appropriate and inappropriate social behaviors, and models to imitate in subsequent role playing activities. A daily lesson guide for the teacher accompanies each videodisc presentation. The program also includes a behavior management system that is used during and after the videodisc and role playing phase. The results of the effectiveness study indicate that the 15 children with behavior disorders that participated in the program scored significantly higher on a post-training measure of peer acceptance than a control group of 15 children with behavior disorders that did not participate in the program. Also, the participants were rated significantly higher than control students on a teacher post-training checklist of social skills covered in the program. Appendices include a sample unit from the teacher training manual and a sample lesson. (Contains 29 references.) (CR)

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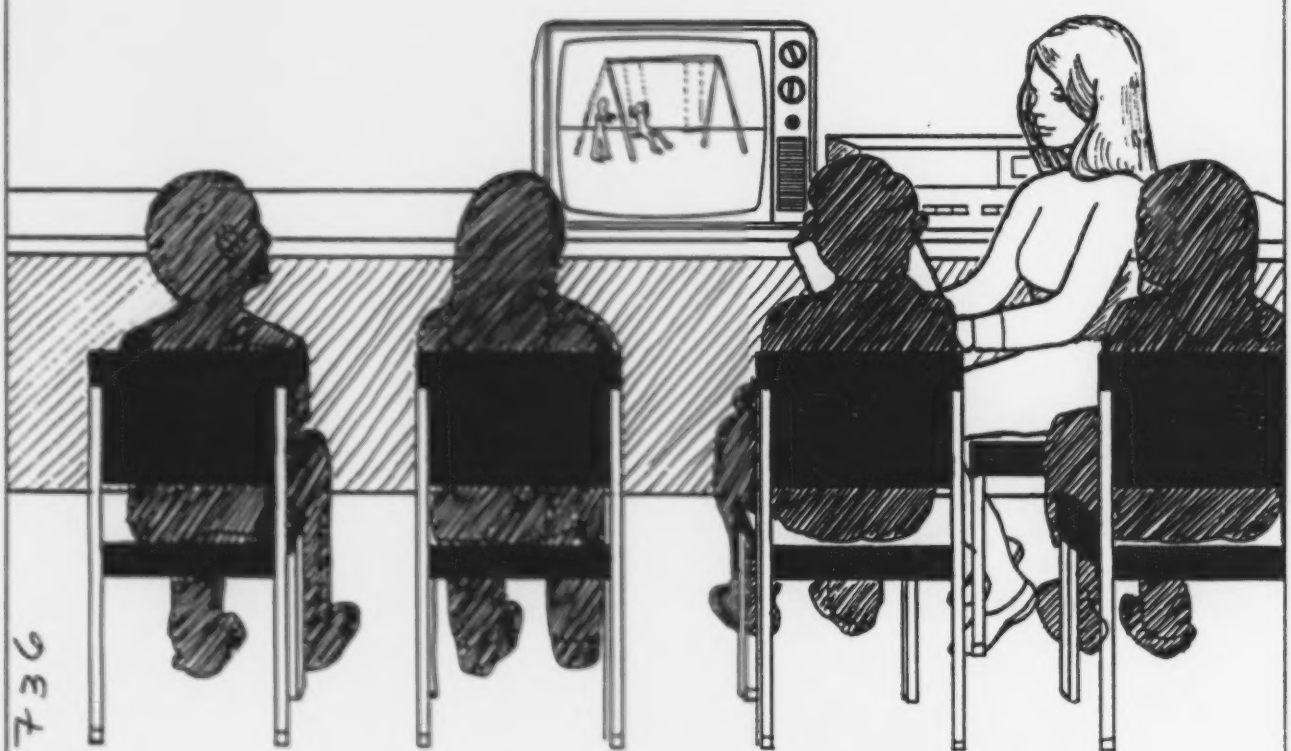
INTERACTIVE VIDEODISC SOCIAL SKILLS PROGRAM

FINAL REPORT



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DEVELOPMENT AND FIELD TESTING OF A

MICROCOMPUTER/VIDEODISC BASED SOCIAL SKILLS CURRICULUM FOR

THE SEVERELY EMOTIONALLY DISTURBED CHILD

Project Staff

Administration

Principle Investigator, Ron Thorkildsen, PhD.
CoPrinciple Investigator, Danial Morgan, PhD.
Production Coordinator, Kim Allard

Instructional Designers

Penny Hansen, EdS.
Joseph Ferrara, PhD.
Julie Necefer
Debra Cheney

Computer Programmers

Russell Awakuni
Ethy Shaw
Bob Reid

Secretaries

Glenda Nesbitt
Jill Peterson
Danette Steinitz

Equipment

Glen Kartchner

Project Duration: 10/1/1981 6/20/1984

TABLE OF CONTENTS

Page

LIST OF TABLES iv

LIST OF FIGURES vi

ABSTRACT vii

SECTION

I. INTRODUCTION 1

Purpose of Project 1
Background 2
Statement of the Problem 6
Research Questions 7
Research Design 8
Significance of the Study 8

II. THE INTERACTIVE VIDEODISC SOCIAL SKILLS PROGRAM 9

III. IVSS PROGRAM DEVELOPMENT AND FIELD TESTING . . . 21

Objective 1 22
Objective 2 28
Objective 3 37
Objective 4 48
Objective 5 48

IV. RESEARCH STUDY PROCEDURES 49

Timelines of Study 49
Research Design 50
Subjects 50
Measures 56
Data Analysis 63

V. RESULTS 67

Treatment Implementation 67
Research Question 1 68
Research Question 2 72
Research Question 3 72
Research Question 4 77
Research Question 5 82
Research Question 6 84
Research Question 7 86
Research Question 8 88

VI. SUMMARY AND CONCLUSIONS 91

Using a Videodisc in Social Skills Training 91
IVSS Program Effectiveness 94
Comparison with Other Social Skills Training Programs 102
Program Implementation 106
Recommendations for Further Research 107

REFERENCES 108

APPENDICES

A. INSTRUMENTS AND QUESTIONNAIRES 111
B. ADDITIONAL TABLES 119
C. SAMPLE UNIT: TEACHER TRAINING MANUAL . . . 122
D. SAMPLE LESSON: DAILY LESSON GUIDE 130
E. PHASE I AND PHASE II POINT CARDS 152
F. LEVELS OF VIDEODISC APPLICATIONS 155

LIST OF TABLES

Table		Page
1.	Treatment Group Student Information	52
2.	Criteria for Determining Peer Acceptance Classifications	55
3.	Dependent and Independent Variables	63
4.	Percent of Treatment Implementation by Resource Room Teachers	68
5.	Mean Item Scores and Standard Deviations on IVSS Social Skills Checklist	69
6.	Two Way Analysis of Covariance on IVSS Social Checklist Posttest with the Pretest as the Covariate	70
7.	Mean Score and Standard Deviation for Each Classroom on IVSS Social Skills Checklist	71
8.	Analysis of Covariance on IVSS Social Skills Checklist Posttest with Pretest as the Covariate	72
9.	Means and Standard Deviation of Observed Positive Behaviors for Eight Two Week Periods for Experimental and Control Group Students	74
10.	ANCOVA on the Eighth Set of Observational Scores with the First Set of Observational Scores as the Covariate	76
11.	Repeated Measures Analysis of Covariance on Eight Sets of Observations of Positive Social Interactions	76
12.	Trend Analysis of Experimental Group Scores on Eight Sets of Observations of Positive Social Interactions	77
13.	Mean Scores and Standard Deviations for Treatment Groups and Type of Student on Peer Acceptance Rating	79

14. Analysis of Covariance on Peer Acceptance Rating Posttest with the Pretest as the Covariate, n = 30 80

15. Mean Score and Standard Deviation for Each Classroom on Peer Acceptance Ratings 81

16. Analysis of Covariance on Peer Acceptance Rating Posttest with Pretest as the Covariate 82

17. Mean Scores and Standard Deviations on Self-Esteem 83

18. Two Way Analysis of Covariance on Self-Esteem Posttest with the Pretest as the Covariate 84

19. Mean Scores and Standard Deviatons on Walker Behavior Checklist--Resource Teachers 85

20. Two Way Analysis of Covariance on Walker Behavior Checklist Posttest with the Pretest as the Covariate Resource Teachers 86

21. Mean Scores and Standard Deviations on Walker Behavior Checklist--Regular Teachers 87

22. Two Way Analysis of Covariance on Walker Behavior Checklist Posttest with the Pretest as the Covariate Regular Teachers 88

23. Mean Scores and Standard Deviations on Consumer Satisfaction 89

24. Two Way Analysis of Covariance on the Consumer Satisfaction Checklist Posttest with the Pretest as the Covariate Regular Teachers 90

LIST OF FIGURES

Figure		Page
1.	Example of Instructional Sequence	13
2.	Branching Logic for One Consequence Training Situation	31
3.	Revised Branching Logic for One Consequence Training Situation	32
4.	Major Activities and Timelines of Research Study	49
5.	Percent of Observed Positive Social Interactions for Treatment and Control Groups over Sixteen Weeks. Best Fit Regression Lines for Each Group	75

ABSTRACT

This federally funded project was conducted between October 1, 1981 and June 30, 1984. It consisted of two major components. The first component involved development and preliminary field testing of the Interactive Videodisc Social Skills Program (IVSS Program). The second component involved the research that was conducted to determine the effectiveness of the IVSS Program. This report describes both components.

The IVSS program teaches children how to use appropriate tone of voice, phrasing, and body language in such social interactions as getting involved and being positive. The videodisc is used to present (1) examples of appropriate and inappropriate social behaviors, and (2) models to imitate in subsequent role playing activities. A daily lesson guide for the teacher accompanies each videodisc presentation. The program also includes a behavior management system that is used during and after the videodisc and role playing phase.

Two formative field tests using interactive videotape were conducted in resource rooms during the development of the program. Revisions were made based on these field tests, and a videodisc was produced. A research study was then conducted to determine the effectiveness of the videodisc program.

The study was conducted in elementary school resource rooms, each containing five mildly handicapped students. The students were randomly assigned to participate in the program (experimental

group) or to continue their regular resource room program (control group). The students were classified as neglected, accepted, or rejected. Data on the student's social behavior, acceptance by nonhandicapped peers, self-esteem, and treatment implementation were collected over a four month period.

Experimental group students scored significantly higher on a post-training measure of peer acceptance than did control group students. Also, within the experimental group the neglected and accepted students scored higher than did rejected students. The experimental and control group students did not differ on the post-measure of self-esteem.

Experimental group students, irrespective of their classification, were rated significantly higher than control group students on a post-checklist of social skills covered in the program. This checklist was completed by each student's resource room teacher. No treatment effect was found for a post-checklist of social behaviors not covered in this program; this checklist was completed by students' regular and resource room teachers.

The social behavior of the students in natural school settings was directly observed for sixteen weeks. Treatment group students made a greater improvement than did control group students, but the difference was not statistically significant.

SECTION 1

INTRODUCTION

The project described in this report (Project # GOO8101537) was funded by the U.S. Office of Education Programs. The project began on October 1, 1981 and was completed on June 30, 1984. The project consisted of two major components. The first component involved development and preliminary field testing of the Interactive Videodisc Social Skills Program (IVSS Program). The second component involved the research that was conducted to determine the effectiveness of the IVSS Program. This report describes both components. A rationale for the project is presented in the following parts of this section, i.e., Section I. The IVSS Program is described in Section II and the process involved in the development of the program is described in Section III. The research study is described in Sections IV, V, and VI.

Purpose of Project

The purpose of this project was to develop and investigate the effectiveness of a social skills training program for children who have been identified as mildly emotionally disturbed and who have been placed in a resource

room for part of their daily instruction. A special feature of the program is that it utilizes an interactive videodisc system to teach children a set of social skills.

The investigation determined whether social skills training can increase the number of positive social interactions of handicapped children toward their non-handicapped peers, reduce the incidence of negative social behaviors, improve their self-concept, and increase acceptance by their non-handicapped peers.

Background

Deficiencies of Handicapped Children

Combs and Slaby (1977) define social skills as "the ability to interact with others in a given social context in specific ways that are societally acceptable or valued and at the same time personally beneficial, mutually beneficial, or beneficial primarily to others" (p. 162). There is substantial evidence that handicapped children are deficient in these social skills (Bryan & Bryan 1979; Gresham, 1981).

The passage of P.L. 94-142, which mandates mainstreaming, has substantially increased the number of handicapped children in regular classroom settings. Mainstreaming was based on the notion that physical placement of handicapped children in the presence of their nonhandicapped peers would result in increased social interaction and mutual acceptance. There is increasing evidence, however,

that mainstreamed handicapped children either are not socially accepted or are overtly rejected by their non-handicapped peers (Gresham, 1982). Since mainstreaming placement by itself is not effective, there is a need to help the mainstreamed handicapped child meet the social standards of both the regular teacher and a new peer group.

Need for Social Skills Training

The acquisition of most social skills usually occurs unsystematically and unintentionally. Young children learn social behaviors by observing and modelling parents, other adults, siblings, and peers. This unsystematic, unintentional method of learning, however, is not sufficient for many handicapped children (Cartledge & Milburn, 1978). Based on his study of mainstreaming, Gresham (1982) concluded that handicapped children do not acquire social skills vicariously through observation of non-handicapped peers. They need to be systematically taught social skills and reinforced for using these skills.

Several research reviewers (French & Tyne, 1982; Gresham, 1981; Gresham & Lemenak, 1983; Van Hasselt, Hersen, Whitehill, & Bellac, 1978) found strong evidence that a lack of social skills in childhood results in long-term social and academic problems in school and social adjustment problems in adulthood. La Greca and Mesibov (1979) suggested that the social skills required for successful social inter-

actions become more complex as children grow older. Without early intervention, then, the socially unskilled handicapped child may fall further and further behind his peers in social development and academic performance.

Available Programs

Social skills training programs are based on the notion that social skills are learned behaviors, and that deficits in these skills can be remediated through systematic instruction. Numerous programs of this type have been developed. Reviewers of these programs list the following components as necessary for providing effective social skills training for handicapped elementary children: systematic instruction, training for generalization, nonhandicapped peer involvement, and teacher training (Gresham, 1982; Likins, 1983; Stowitschek & Powell, 1981).

Stowitschek and Powell analyzed 75 social skills training programs and found the majority of these programs to be lacking in these components. All of these components were included in the development of the IVSS program.

Social Skills Research

Social skills research started in the early fifties, and since then numerous studies have been conducted. Recent reviewers of these studies (Finch & Hops, 1983;

French & Tyne, 1982; Gresham, 1981; Gresham & Lemanek, 1983) cited numerous programs that have successfully taught social skills to both handicapped and nonhandicapped children. Particularly with handicapped children, however, there is little evidence that newly learned social skills transfer to other behaviors and settings. For example, there is little evidence that acquired peer interaction skills reduce acting out behaviors, or that social skills learned in resource room transfer to the regular classroom and playground.

The reviewers concluded that there is a need for additional research to determine whether social skills generalize to other social behaviors and other settings, whether acquired social skills are maintained, and whether social skills training is differentially effective for children who are classified as neglected or as rejected.

The research study in this project was specifically designed to address these research needs. Generalization to the regular classroom was determined by rating from the regular teachers, peer acceptance assessments, and observations outside the special education classroom. Generalization to other social behaviors was determined by having regular and special education teachers rate the students on social behaviors not covered in the training program. Maintenance was determined by naturalistic observations over a 10-week period.

Statement of the Problem

The current literature reaffirms the need for a social skills training program that addresses the program deficiencies identified by Stowitschek and Powell (1981), and that is validated by assessing generalization and maintenance in addition to acquisition of skills.

The instructional program developed in this project consists of a discrimination training component in which students are taught to discriminate between appropriate and inappropriate social behaviors. This component utilizes the videodisc to (a) present examples of appropriate and inappropriate social behavior, (b) present model social situations for behavioral imitation and rehearsal, and (c) sets up social situations requiring the student to make decisions and then presents social consequences based on those decisions.

A generalization component follows the direct instructional component. A behavior management system is provided for use throughout the program. A teacher training component is contained on the videodisc, and an optional peer training component is provided for use in the regular classroom.

Two preliminary field tests prior to the major research study were conducted as part of the development of the program. The purpose of the major research study was to determine the effectiveness of the revised program by

investigating whether there are significant differences between students who receive the social skills instruction (trained students) and students who do not receive this instruction (untrained students). The students in both groups were mildly handicapped students in the third, fourth, or fifth grades. The trained students received the social skills training by their resource room teacher using the IVSS Program.

Research Questions

1. How well are the social skills that are taught by the IVSS Program learned by students, as perceived by their resource room teacher?

2. Do trained students exhibit more positive behaviors that untrained students immediately after the direct instruction and role playing parts of the treatment have been completed?

3. Does the use of only the behavior management system by the resource room teachers maintain positive behaviors over a three month period?

4. Do trained students show a greater increase in peer acceptance than untrained students?

5. Do trained students show a greater increase in self-esteem than untrained students?

6. Do resource room teachers rate trained students as having fewer negative behaviors than untrained students?

7. Do regular room teachers rate trained students as having fewer negative behaviors than untrained students?

8. Are the regular teachers more satisfied with the trained students' behavior than with the untrained students' behavior.

Research Design

A pretest-posttest, control-group design (Campbell & Stanley, 1963) was used to determine treatment group differences on the dependent variables, and whether the differences were maintained over time. The dependent measures involved variables relating to positive social behavior, peer acceptance, self-esteem, and teacher ratings. The independent variables involved presence or absence of training and type of student (neglected or rejected).

Significance of the Study

The IVSS Program contains a majority of the components cited as lacking in many other social skills training programs. Additionally, the training component was developed using validated instructional design principles, and state-of-the-art instructional technology was used in the administration of the training for both students and teachers. Thus the IVSS Program offers the promise of being more beneficial to children lacking social competence than previous programs.

SECTION II

THE INTERACTIVE VIDEODISC SOCIAL SKILLS PROGRAM

Several reviewers, as noted in Section I, have listed the following components as neccesary for providing effective social skills training for handicapped elementary children: systematic instruction, training for generalization, nonhandicapped peer involvement, and teacher training. These components are deficient in existing social skills programs (Stowitschek & Powel, 1981), but were included in the IVSS program. These components are included in the following description of the IVSS program.

The IVSS program is designed to teach fourth, fifth, and sixth grade level Emotionally Disturbed (ED) children a set of five peer-to-peer cooperative social interaction skills which will facilitate their overall school adjustment. Cooperative social interaction is described as follows: cooperative interaction means getting along with others. The five cooperative interaction target skills taught in the program are:

1. Getting Involved Getting started playing with others or helping others.
2. Being Involved Doing something with someone else.
3. Ending Positively Stopping an activity at the right time in a nice way.
4. Being Positive Saying nice things to others and being polite.
5. Remaining Calm Behaving appropriately in unpleasant situations.

Microcomputer/videodisc equipment. A major problem in developing social skills training programs is how to present realistic examples and models. A verbal description of a complex social behavior is difficult to write and usually not very compelling.

Recently developed videodisc players possess all the capabilities of videotape players plus they have the ability to accurately select and present any material contained on the videodisc and present still frames of excellent quality.

Several social skills training programs have effectively used videotape to present realistic examples (Morgan et al., 1982, Walker, 1983). However, videotape has limitations when it is necessary to use the examples in a variety of teaching and modeling situations. This is because presentation of a specific example requires: (1) searching the videotape for the example; (2) presenting the example; and (3) stopping on a still frame that serves as a reminder to the student of the example just presented.

Videotape searching seldom takes less than ten seconds and may take up to two or three minutes. The information stored on a videodisc, however, is readily available, and searching typically takes one or two seconds. Presenting still frames with a videotape player causes excess wear on the tape, and the still frame is generally of poor quality. A videodisc player can continually read a single track to present a high quality still frame with no wear on the

videodisc.

The hardware components of the videodisc system used in the IVSS Program consist of a Pioneer 7820III videodisc player, color monitor, and remote control unit. The microcomputer built into the videodisc player is used to control the logic of the system through computer programs stored on the videodisc along with the video instructional materials. The IVSS program includes three videodisc sides containing instructional material. All of the hardware interfaces and software required to deliver the social skills instruction were developed through projects directed by the author.

Teacher training. A teacher training component is part of the IVSS Program. The teacher training component is contained on the videodisc but also includes a teacher training manual (see Appendix C).

The teacher training manual is used interactively with the videodisc. The videodisc presents demonstrations and examples of correct use of the social skills training program and makes reading assignments in the teacher training manual. The teacher training manual contains explanations of teaching procedures, definitions or terms and rules, suggestions for feedback procedures and reinforcers, and selfcheck quizzes at the end of each training section. The teacher training component requires approxiametly three hours to complete. This training does not require

assistance from any project staff.

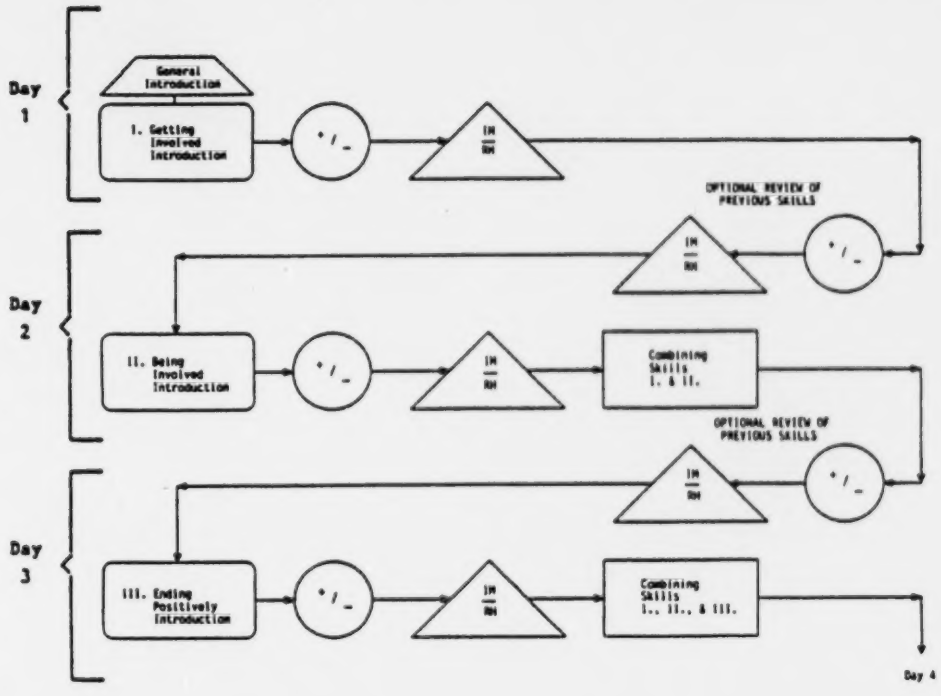
A reference manual is also part of the IVSS program and is designed to be used as a support to teachers during all phases of the program. The teacher's reference manual contains alphabetically-ordered items of information about the entire program. Both manuals, i.e., Teacher Training Manual and Teacher's Reference Guide can be used for reference purposes throughout the program.

Social skills training. Instructional sessions occur during the first 13 days of the social skills training program. These sessions take place in the resource room with the teacher and small groups of up to four students.

The first seven days constitute the direct instruction component of the program. During this time the teacher uses the videodisc and daily lesson guide to present examples of appropriate and inappropriate social behaviors and to guide discussion, imitation, and rehearsal activities. the next six days of instructional sessions are spent practicing these skills in role play activities.

Figure 1 illustrates the instructional sequencing of the first three days.

On the first day the teacher uses the daily lesson guide and videodisc to present a general introduction of the program which includes the critical attributes and the social skills training to follow. Next, a specific introduction is presented for the skill being taught that



The circles in the flowchart represent the discrimination training component. In this component concepts are taught through the presentation of positive and negative examples on the videodisc. Typically 12 examples are presented. Five instructional scenes are shown first and are identified as either positive or negative examples of the the target skill by the teacher. Testing scenes are then presented in which students are required to make a discrimination and then discuss their answers.

The triangles represent the rehearsal component. In this component students view selected scenes on the videodisc depicting appropriate social interaction. A student(s) is selected to imitate the exact behavior shown in the scene. Then they rehearse the scene by practicing the skill(s) using their own words, tone of voice and body language.

The rectangles represent the combining skills component. Combining skills is the term used to specify the act of putting the target skills together in combination. As each new skill is learned it is consolidated with previously learned skills resulting in a chain of acquired social behaviors. Students work with combined skills through discrimination training, imitation, and rehearsal activities on Days 2, 3, and 5.

FIGURE 1. Example of Instructional Sequence

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day. For example, on Day 1 there is an introduction to the "getting involved" skill. This introduction is followed by discrimination training, imitation, and rehearsal activities.

Each subsequent day begins with an optional review of previous lessons and then a new skill is introduced. For example, on Day 2 (see Appendix D), the teacher has the option to review "getting involved" using discrimination training, imitation, and rehearsal activities or skip the review altogether. The teacher then introduces and teaches the new skill, "being involved", and teaches the combination of "getting involved" and "being involved". As each new skill is learned, it is combined with previously learned skills resulting in a chain of acquired social behaviors that contribute to cooperative social interactions. Discrimination training, imitation, and rehearsal activities are used for reviewing, teaching, and combining the five target skills in the IVSS program. This basic pattern is continued through day seven when all the skills have been presented.

Role playing, which does not involve use of the videodisc, is conducted during days 8 through 13. Role play activities are used to provide an opportunity for the students to apply their cooperative interaction skills in a variety of situations during the instructional session. The students are encouraged to generate role play situations on

their own during a brainstorming session. There are, however, a list of role play ideas contained in the reference manual. This component is critical for students to actually begin performing their new skills. It functions as a transitional step to help facilitate the generalization of the cooperative interaction skills taught during discrimination training.

During the direct instruction component students are required to give overt responses to all questions or when discussing the videodisc scenes. All students are actively involved in the imitation, rehearsal, and role play activities.

Social skills training in the IVSS program emphasizes systematic instruction using the design principles of Direct Instruction.

Direct Instruction (Engelmann & Carnine, 1982) is an instructional method based on behavioral theory. Primarily, Direct Instruction involves teaching through examples. Teaching social skills requires the presentation of examples of social behaviors. In the discrimination training portion of the program, positive and negative examples of appropriate cooperative interaction are presented. These examples are sequenced according to the principles of Direct Instruction. For instance, when presenting examples depicting appropriate and inappropriate tone of voice, only tone of voice is changed between juxtaposed examples. All

other aspects of the examples are held as constant as possible.

In general, Direct Instruction is aimed at greatly reducing the number of extraneous variables in the teaching process and maintaining consistency in student/teacher interactions. By using the videodisc, verbal and nonverbal presentation and feedback do not vary between students and occasions as it might if a teacher were making the presentation. Voice level, intonation, eye contact, body position, and other nonverbal nuances are controlled.

Direct Instruction principles were also used to determine how and when to (1) review and combine skills, (2) elicit overt responses from the student, and (3) provide consistent corrective feedback.

Generalization training. Training for generalization, as noted earlier in this section, has been identified by several reviewers as a necessary component for providing effective social skills training for handicapped elementary children. Throughout the IVSS program efforts were made to ensure that the instructional procedures would facilitate generalization.

In the direct instruction component generalization is achieved by using a variety of simulations in the discrimination training. Using the combined audio/video capability of the videodisc in the discrimination training, a pool of scenarios depicting a wide variety of situations is

presented. The student not only sees how a skill such as "Getting Involved" is accomplished in a number of different settings (home, community, etc.), but also how many different situations call for the use of appropriate social behaviors.

Imitation and rehearsal activities help facilitate generlization by enabling students to develop a repertoire of responses to a wide range of settings and situations (through the use of the videodisc) that would be comfortable for them to use in a variety of peer-to-peer social interaction situations.

Role play activities help facilitate generalization by providing an opportunity for students to apply the skills learned during discrimination training, imitation, and rehearsal activities in a wide variety of situations during instructional sessions. Students generate their own role play situations.

On day eight the teacher begins the Generalization Sequence of the IVSS program. The major component of this sequence is the observation of student behavior that occurs outside of the instructional session. The teacher observes the student(s) for 10 to 15 minutes as they are engaged in peer-to-peer social interactions, rates their behavior, and provides feedback on their success. During days 8 through 13 the teacher provides additional structure to the observation period by giving special assignments to the

students. These assignments are designed to help students learn what is expected of them during the observation period. Special assignments are role play situations selected from the list generated during the brainstorming session.

Behavior management. During the entire program, a behavior management system is used by the teacher. A two-phase point system is used to award points to students for meeting certain contingencies.

Phase I of the point system is used during the first 13 days of the program. This phase is designed to provide feedback on student performance and to maintain positive behaviors during instructional sessions. Each student is given a Phase I point card (see Appendix E). Students earn points during instruction by obeying the teacher, paying attention, working hard, following classroom rules, and by demonstrating the cooperative interaction skills. Points are lost for disobeying the teacher, disturbing others, and talking out of turn. The earned points are exchanged on a daily basis for items on a reinforcer list. Items on the list could consist of special activities, games, and special privileges.

Phase II of the point system begins on day eight as the teacher starts observing students outside of the instructional session. This phase is designed to help students generalize their cooperative interaction skills

outside of the instructional session, i.e., the playground, lunchroom, or regular classroom. The Phase II point card (see Appendix E) is used when students have free time, during lunch break or recess. To earn points, students are expected to cooperate with other students by using their cooperative interaction skills. Points are lost if the student becomes engaged in verbal aggression, physical aggression, or if they disobey the teacher.

The teacher observes the student(s), rates their behavior according to a five-point rating scale, and awards points based on their rating. The earned points are exchanged in a similar way as those earned during Phase I.

Beginning on day 8 and running through day 13 both Phase I and Phase II point systems will be in use. After day 13 only Phase II will remain in use. At this time the teacher will begin the self-evaluation training component of the IVSS program. This component is designed to facilitate maintenance of the cooperative interaction skills. It provides a step-by-step process where students learn to independently evaluate their own behavior. Students progress through this component depending on how well they use their cooperative interaction skills and interpret their own behavior. Specific schedules for the type of evaluation process to use for students is provided for teachers in the Teacher's Training Manual and Teacher's Reference Guide.

Peer training. A peer training component is included

in the IVSS program. Instructions are provided for training selected nonhandicapped peers to work directly with the handicapped student receiving the social skills training. Peer tutors are selected by the regular teacher. The peer tutors are provided with an introduction to the IVSS system and trained in how to provide positive reinforcement. Each peer tutor is assigned to play with a student receiving the social skills training. The peer tutor shares points with this student.

A group presentation is made to all students in each regular classroom containing one or more students who are receiving the social skills training. The goals of the project are discussed and the students in the regular classroom are informed that they will share in the points earned by the students working in the social skills program. The group points can be used for free time activities.

IVSS Program Evaluation. The IVSS Program was evaluated in three stages. The first two stages involved formative field tests utilizing an interactive videotape system. These field tests are described in Section III. The final evaluation, utilizing the videodisc system, was conducted to determine the effectiveness of the IVSS system. This evaluation constituted the major research study and is described in Sections IV, V, and VI.

SECTION III

IVSS PROGRAM DEVELOPMENT AND INITIAL FIELD TESTING

The major production goal for the IVSS project was to design and develop a program to teach social skills that would assist emotionally disturbed children to interact with others in a socially acceptable and personally beneficial way. The IVSS project incorporated the major components of the Mediated Social Skills (MSS) and the Interactive Videodisc for Special Education Technology (IVSET) projects. Formative evaluations were to be used to assist in refining the program to a point that would eventually lead to a summative evaluation.

The following were the procedural objectives of the IVSS project:

Objective 1: Based on the results and conclusions of the two projects, a comprehensive integration plan will be developed from which the social skills curriculum will be modified to incorporate the videodisc components.

Objective 2: Produce one small component of the IVSI program and conduct a formative evaluation utilizing a videotape simulation. The selected component will include discrimination and chaining sequences to be evaluated by IVSI Program staff and external consultants.

Objective 3: Produce and conduct a preliminary field test of the pilot IVSI Program. The pilot materials include one side of videodisc and teacher training procedures. The discrimination and chaining sequences will be field tested with three learners and the sample of training materials will be reviewed by two teachers.

Objective 4: Based on the results and conclusions of the two projects, a comprehensive integration plan will be developed from which the social skills curriculum will be modified to incorporate the videodisc components.

Objective 5: Field test the total IVSS program with an emotionally disturbed population at the Children's Behavior Therapy Unit.

The remainder of this section contains a discussion of the tasks involved in completing each of the five procedural objectives listed above. A detailed description of the development and evaluation process is provided in a separate report by Hansen (1985). This report gives a step-by-step decription of the numerous changes made to the program during the development process.

Objective 1

Based on the results and conclusions of the MSS and IVSET projects, a comprehensive integration plan will be developed and the social skills curriculum will be modified to incorporate the videodisc components.

Before steps could be taken toward development of a comprehensive integration plan for the MSS and IVSET projects, staff members had to be oriented to those projects. An intensive orientation meeting was held to familiarize staff members with each project. Those projects are described briefly below.

The MSS Project

The Mediated Social Skills (MSS) project was funded by a grant from the U.S. Office of Special Education. The project was conducted at Utah State University. The goals of this project were (a) to develop eight mediated instructional packages for teaching social skills to

handicapped children and youth, and (b) to develop procedures and materials for training professionals in the use of the packages. The following skills were targeted for inclusion in the instructional packages: conversation skills, social interaction skills for adolescents, manners, dealing with negative interactions, dealing with peer pressure, self-control of impulsive behavior, social interaction skills for withdrawn children, and being positive skills.

The MSS packages were designed for use in an educational setting. Potential users were to be: self-contained special education teachers, resource teachers, teacher consultants, psychologists, social workers, regular classroom teachers, and classroom aides. The packages were designed for mildly and moderately handicapped children and youth (particularly students with behavior disorders) in elementary and secondary grades. The packages were designed in such a way that they could be used with an individual child or with small groups (N = 3 to 5).

The packages provided the user with instructions for both direct and indirect teaching of social skills: (a) direct teaching with an individual or small group in a classroom setting and (b) indirect teaching outside the classroom setting during non-treatment times. Each package also included specific directions related to managerial issues, i.e., procedures for conducting training sessions, directions for gaining the student's attention, prompting,

using signaling responses, praising correct responses, correcting incorrect responses, and handling inappropriate behavior.

Systematic instructional procedures were employed to provide the user with a means of maximizing the instructional control necessary when working with behaviorally disordered children. Each package followed the same basic format in applying those systematic instructional procedures. The major teaching strategies utilized in each package are described briefly below.

1. Overview. This section provided an overview of the lesson, a task analysis of the behaviors to be taught, and general instructions to the teacher.

2. Review. This section provided directions for reviewing the previous day's lesson as well as homework assignments.

3. Introduction. This section provided an introduction for students to the lesson and a rationale for the specific behaviors they would learn. The teacher's manual was supplemented with audiovisual materials to assist in demonstrating the skills in this section as well as in the next section.

4. Discrimination Training. This section included three activities: (a) the presentation of examples for appropriate use of the skills, (b) the presentation of non-examples for inappropriate use of the skills, and (c) a random presentation of examples and non-examples.

5. Student Practice. This section included three activities: (a) role play and rehearsal activities, (b) guided practice, and (c) student-initiated practice.

6. Homework. This section provided directions for assigning and rehearsing special practice assignments to be completed by students at home or in other naturalistic settings. These special assignments helped facilitate the generalization (or transfer) of the newly-learned skills with a variety of persons and settings.

The IVSET Project

The Interactive Videodisc for Special Education Technology (IVSET) project was funded by a grant from the U.S. Office of Special Education. The project was conducted at Utah State University. Its primary goal was to develop and field test a system to provide Computer-Assisted Instruction (CAI) for mentally handicapped students.

The system that was developed, i.e., the Microcomputer/ Videodisc (MCVD) system, included the following hardware: (a) a Pioneer Model 7820-3 Videodisc Player, (b) an Apple II microcomputer with two 5 1/4" floppy disk drives, (c) a SONY 12" color monitor, and (d) a Carrol Manufacturing Touch Panel built into the monitor.

The Pioneer Model 7820 III Videodisc Player was an instructional videodisc model and contained its own microprocessor. It was selected for its rapid, random access capabilities (search retrieval of specific segments

could occur in less than one second), its still frame capabilities, and its excellent audio and video reproduction. The Apple II microcomputer was the MCVD component that controlled the system through software programs and an interface device that was attached to the computer. Both the software and interface device were developed by the IVSET project staff. A videodisc (the approximate size and appearance of an LP phonograph record) was the storage medium. It could store 54,000 individual frames of video or 30 minutes of audio and motion video on each side. Two audio tracks were also available. The touch panel was a light interrupt system that allowed the student to interact with the system by touching the monitor screen.

The MCVD system was interactive with the student. The microcomputer software controlled the videodisc, i.e., where it would begin playing, when it would go into freeze frame, how long it would wait for a response, etc. Once activated the MCVD system would present audio instruction and associated video image(s) on the monitor, the student would respond by touching a specific image on the monitor's screen. Touching the screen would interrupt light beams transmitted from each axis of the touch panel. The point of interruption (identified as x and y coordinates) would be detected by the touch panel and transmitted to the microcomputer. The computer compared the transmitted coordinates with the correct ones identified in the software program. If correct, the videodisc was accessed to provide

audio and video feedback to reinforce the response. The videodisc also contained recorded segments of feedback and remedial instruction for incorrect response and no-response conditions. Each segment of instruction had associated parameters that controlled the number of times a student had to respond correctly before being allowed to advance to the next instructional segment. As the student interacted with the system, data was also collected and stored on a floppy disk by the microcomputer.

To date, six instructional programs have been developed for use with the MCVD system: (a) Matching Sizes, Shapes, and Colors, (b) Time Telling, (c) Identification of Coins, (d) Functional Words, (e) Sight Reading, and (f) Directional Prepositions. The first four programs were field tested with moderately-mentally handicapped students, and the latter two were field tested with learning disabled students in elementary resource rooms.

The IVSS Project

The Interactive Videodisc for Social Skills (IVSS) project began in October of 1981. As a result of the intensive orientation meeting, development of a comprehensive integration plan was set into motion for modifying the social skills curriculum of the MSS project to incorporate the videodisc components of the IVSET project. The resulting program was expected to provide advantages in individualization, record keeping, consistency of

presentation and feedback, immediacy of feedback, extensiveness of training, variety of simulations, branching capabilities, and economy of teacher time.

An ERIC search of current literature was conducted to locate any recent studies on social skills training programs that used microcomputer and videodisc technologies. The ERIC search failed to identify any useful information in that area.

Initially it was planned to use the exact teaching strategies followed in the MSS project, and then to enhance the teaching examples through use of the videodisc. As the project developed, this plan changed considerably as is described in the remainder of this section.

Objective 2

Produce one small component of the IVSS program and conduct a formative evaluation utilizing a videotape simulation. The selected component will include discrimination and chaining sequences to be evaluated by IVSI Program staff and external consultants.

Prototype Design and Production

The videodisc that would eventually be used in the IVSS program was seen as potentially valuable for use with two areas related to discrimination training: (a) presenting scenes for general discrimination, and (b) providing a more complex discrimination experience not available in the MSS project where extensive chaining sequences could be used. Videotape was used, however, in all of the field testing.

The teaching strategy of discrimination training utilized in the MSS project was selected for use with the prototype tape. Extensive videotaping associated with the MSS project was already available; the sequences included general discrimination scenes which were considered for later use with the IVSS Project. As a result, it was decided to concentrate efforts for the prototype tape on the more complex, and as yet untried, chaining or "consequence training" sequences mentioned above.

The prototype tape was limited to one skill area. This allowed efforts to be directed toward collecting data on presentation and response formats associated with the consequence training sequences critical to the overall design of the IVSS project. The skill area selected for discrimination training was "Invitations to Play." It was selected from a list of skills covered in the MSS project as well as additional social skills considered important to the IVSS project.

Work began immediately on designing and scripting material for the videotape component itself and also for the written material which accompanied the videotape component.

The written material followed the same design format as that used in the MSS project. It included specific instructions to teachers on implementing the "Invitations to Play" program. It also included specific dialogue to be presented to students.

The videotape component, as mentioned earlier, included consequence training sequences only. It was formatted following basic guidelines and procedures used for instructional programs in the IVSET project.

The "Invitations to Play" program was intended for small group instruction. The videotape component, however, was intended to be used either individually or with groups. To accommodate this diverse use, the videotape contained an introduction section appropriate for both individual or groups. Directions allowing for individual use and instructions and dialogue for group use were covered in the accompanying written materials.

The prototype tape was also intended for use as a Level 3 rather than Level 2 application (see Appendix F). This decision was reached because the extensive branching expected for the consequence training sequences could not be accomodated by the limited capabilities of the videodisc player's built-in microprocessor. Figure 2 shows the intended branching for one consequence training situation.

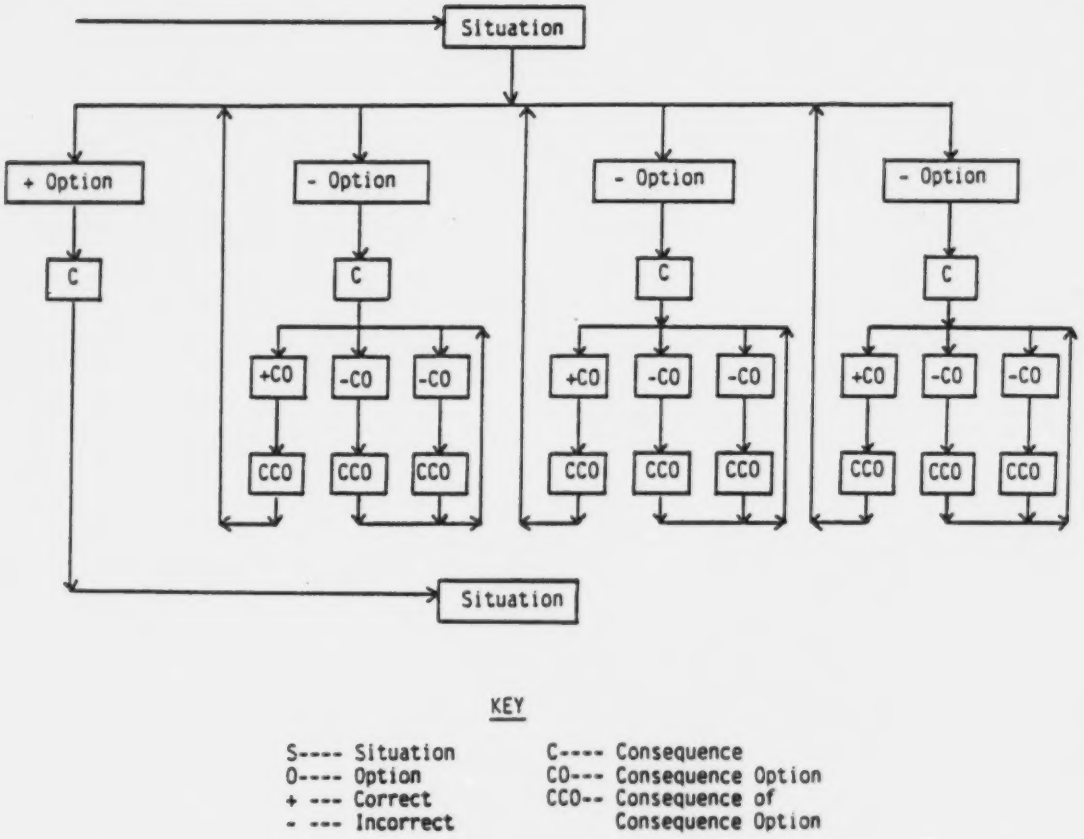

FIGURE 2. Branching Logic For One Consequence Training Situation.

The plan was to present a scene depicting a social situation, have the student make a decision about how an individual in the scene should react to the situation (4 options), and then present a chain of consequences based on the student's choices. This plan was abandoned for three reasons. First it was difficult to develop situations that could follow the full range of expected consequences. Many situations were limited to the number of logical consequences that could be included in the consequence chain. Second, it was difficult to structure a smooth

transition from the end of the chain of consequences to the original situation options. Third, it was suspected that the time-consuming chain of decision-consequence branching would cause students to forget the original social situation and the associated social skill being taught.

The extensive chain of decision-consequence branching was modified. The new plan was to present a scene depicting a social situation, have the student make a decision about how an individual in the scene should react to the situation, (3 options) and then present the consequence of that one decision. Figure 3 shows the revised branching logic for one consequence training situation.

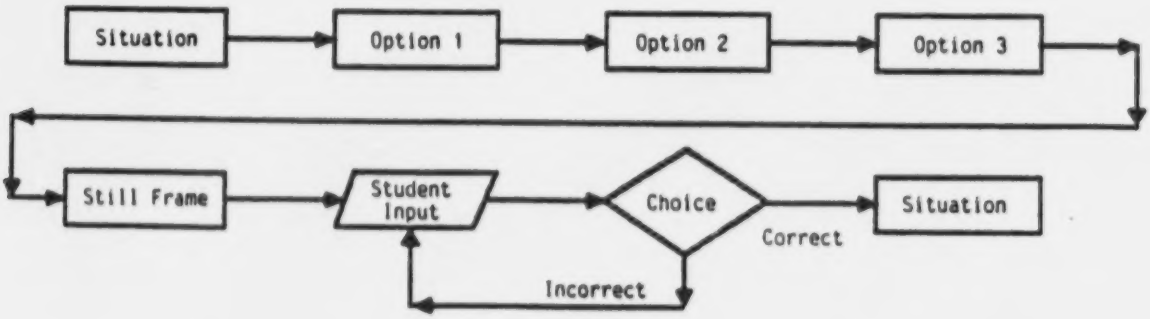

FIGURE 3. Revised Branching Logic for One Consequence Training Situation.

Presentation of the consequence training scenes and the type of response required by the student(s) were designed to meet the individualized and group criteria discussed earlier, and to follow the branching logic as shown in Figure 3.

The narrator on the videotape provided a limited ntroduction to the consequence training component and then

described the first situation. That situation was then shown to the student(s) followed by three scenes (options) showing three different ways the main character in the situation could have solved a particular problem. A still frame picture representing each of the three options was then shown on the screen. The student(s) were asked to touch the one option (on the monitor screen) they thought the main character should have done. The consequence for the option the student(s) selected would then be shown with feedback by the narrator. If correct, the narrator would go on to describe the next consequence training situation. If incorrect, the still frame picture representing the three options would be shown again and the narrator asked the student(s) to make a better choice. This same presentation and response mode was repeated for each consequence training situation.

Twenty consequence training sequences were written from which five were selected for use in the prototype tape. Two of these sequences were written following the expanded format as shown in Figure 2. The other three sequences were written following the revised format shown in Figure 3. The decision to include both formats on the prototype tape was prompted by the need for observable data to base future decisions concerning development of the IVSS project.

Scripts were prepared and storyboarded. Talent, "props", and settings were coordinated and the scenes necessary for the consequence training sequence were

videotaped. Still shots were photographed as needed. Narrative material for introductions, sound-over effects, and the second audio track were taped. All components were then edited together and the consequence training master tape had been produced.

The IVSS program was also to include a teacher training component. To test the feasibility and effectiveness of utilizing videodisc technology with a teacher training component, the decision was made to produce a prototype teacher training tape. This tape was limited in scope to teaching procedures used for giving praise and correcting errors.

The first script involved use of the videodisc almost exclusively for providing information, instructions, feedback, and examples of the skills. To conserve space on the videodisc, the script was revised to utilize more of the text capabilities of the computer in presenting information, instruction, and feedback on the skills. This allowed for more effective use of the videodisc's unique capabilities for presenting examples of the skills along with appropriate narration through the use of its video space and two audio tracks.

The final script was prepared and storyboarded. Talent, "props", and settings were coordinated and the scenes necessary for the teacher training component were videotaped. Narrative material for introductions, sound-over effects and the second audio track were taped. All

components were then edited together and the teacher training master tape had been produced.

The computer programmers worked closely with other staff members in developing the microcomputer software components that would make each videotape interactive with the computer. The program employed was an adaptation from an instructional presentation program used in the IVSET project. This program included response data collection, many control options, and complicated branching abilities. The process of developing the microcomputer software was often complicated by problems with the interface board and its inability to accommodate the branching expectations. Achieving frame accuracy during the searching (branching) process was difficult. Some scenes were cut short while others played past the end. This problem is typical with interactive videotape.

Prototype Evaluation

When the prototype videotapes, microcomputer software, and supplemental materials for both the "Invitations to Play" component and the Teacher Training component were completed, preparations were made to conduct formative evaluations of the materials with internal and external evaluators.

Internal evaluators (members of the IVSS staff) individually reviewed the prototype materials. Their comments were recorded and collected for analysis.

Two external evaluators, Dr. Charles Salzberg and Dr. Hill Walker, also reviewed the prototype materials. Dr. Salzberg was impressed with the overall quality of the tapes. He suggested, however, that the scenes could be more realistic with more aggressive main characters. He also noted that the original situation and associated social skills in the consequence training tape were being lost in the extensive chain of decision-consequence branching.

Dr. Walker was enthusiastic about the general direction of the project. He was impressed with the advantages the videodisc provided over the media used in other programs for social skills training. He felt that utilizing the videodisc for training teachers could be effective and would save using project personnel for that task. He also expressed concern over the complexity of the branching in the consequence training tape. He felt that students would have difficulty in discriminating the critical skills they were expected to learn. Dr. Walker also spoke favorably about the proposed behavior management system. He suggested that a screening process be included for entrance into the program and that allowances be made for different levels of social deviance within the program.

Data collected from both the internal and external evaluators were compared and analyzed. Results indicated areas where further refinements were necessary but did not show the need for any major course changes from the initial plans set by the staff.

During the week of September 27-30, 1982, the IVSS project was involved in a Special Education Programs (SEP) site visit at Utah State University. The site visit was conducted by the U.S. Department of Education, Office of Special Education and Rehabilitative Services. The purpose of this site visit was to monitor the progress and activities of all current grants and contracts awarded by Special Education Programs to Utah State University.

The summary report of the SEP site visit listed the IVSS project as outstanding in its efforts to integrate advances in the rapidly developing microcomputer/videodisc technology. It also indicated that the IVSS project showed promise of providing results that would be in the forefront of microcomputer/ videodisc application in special education.

Objective 3

Produce and conduct a preliminary field test of the pilot IVSS Program. The pilot materials include one side of a videodisc and teacher training procedures. The discrimination and chaining sequences were to be field tested with three learners and the sample of teacher training materials were to be reviewed by two teachers.

Following the formative evaluation process and the SEP site visit, the IVSS staff began the process of further refining some features of the IVSS program in preparation for producing and conducting a preliminary field test of a pilot IVSS program.

The first pilot IVSS program

The results of the internal and external evaluations of the prototype videotape influenced the choice of the first task selected for the refining process. The selection and formatting of the videodisc instruction was based on the evaluations of the prototype tape. The initial plan was re-evaluated and the staff unanimously agreed that a deviation from the structure of the MSS and IVSET projects was necessary. The IVSS program seemed unnecessarily bound to the standards of those two projects in the use of the technology and the formatting of instructional information both on the videodisc and in the teacher's manual. The staff decided not to conform so rigidly to the format and presentation modes utilized by the MSS and IVSET projects. They would strive to merge the best of those projects with new methods to better meet the instructional objectives of the IVSS program. The staff felt it was important to let the instructional objectives of the program dictate the instructional format rather than allow it to be unduly influenced by the wide capabilities of the technology. The critical point was to meet the instructional objectives of the program not to demonstrate the technological capabilities of the equipment.

Direct Instruction Approach

The resulting format of the videodisc and teacher's manual was influenced by the direct instruction (DI) approach developed by Engelmann and Carnine (1982) and

presented in their book, Theory of Instruction: Principles and Applications.

The DI approach was viewed as an effective method of communicating the major skill areas to be taught in the program and flexible enough to be adopted within the teaching strategies already set in place from the MSS project (discriminating training, modeling, role playing, rehearsal and practice, and homework assignments).

The prototype materials developed during the first year were revised using the DI approach. A skeletal script for the videodisc material was completed. It contained narrative introductions for all of the skill areas to be taught, i.e., getting involved, being polite, praising, encouraging, sharing and helping, and negotiating. Scenes showing positive and negative examples of social behavior, organized according to the DI approach, were written for only one of the skill areas, i.e., praising.

A meeting was held with Douglas Carnine to determine the extent to which the DI approach could be used with the IVSS program.

During the meeting, Dr. Carnine pointed out that there was a gap between teaching a skill through positive and negative examples and moving to role play type activities. He explained that teaching through examples required a discrimination response while role play activities required a production response. Dr. Carnine felt that one reason many social skills programs failed to help students

generalize outside instructional settings was because the gap between discrimination (examples) and role play (production) was too broad for students to effectively cross. He felt that there needed to be some type of bridge to help students move from developing discrimination skills to successfully performing the production skills; and he suggested that two steps be included between those two teaching strategies in our program. Following discrimination training he suggested a step that would involve imitating or modeling the appropriate skills. He felt this could be effectively accomplished using the videodisc to show a scene which the student(s) would then model exactly as portrayed on the screen. The scenes to be modeled would need to be as close to real life situations as possible to aid in the generalization process. Next, he suggested a step where students would generate their own responses to the same scenes. The students would rehearse the scene generating their own responses by using the right tone of voice, words or body language in a different way than portrayed in the scene, yet appropriate to the target skill being taught. According to Dr. Carnine students would be able to develop and build a repertoire of responses that were comfortable for them to use in peer-to-peer social interaction situations. During role play activities students would then be able to respond to the social situations being enacted with more skill, confidence, and success. He recommended that role play activities be

introduced only after students had mastered every target skill through discrimination training and had developed their repertoire of responses.

Development of the first pilot IVSS program began immediately following the meeting with Dr. Carnine. The skeletal script and general outline of the IVSS program presented to Dr. Carnine were modified and expanded. Based on the modified script, a videotape and accompanying materials were produced for field testing. An interactive videotape system was used in the field test.

An interactive videotape could simulate the videodisc program, even though the presentation would be of lesser quality than videodisc and search times would be much slower. The videotape provided a means of checking the new instructional process, relevancy of video scenes, and branching logic of the computer program, and would allow for changes in video material at a considerably lower cost than videodisc. All teacher training information for this pilot IVSS program was limited to the written material.

First preliminary field test. While program materials were being produced, preliminary arrangements were made for locating a site for conducting a preliminary field test (in May, 1983) of the pilot IVSS program. The primary purpose of this field test was to examine the appropriateness of the program's videotape materials and instructional process, i.e., the discrimination training,

rehearsal sequence, role play activities, homework assignments, and Phase One of the point system.

A local elementary school resource room involving one resource teacher and four emotionally disturbed students was selected as the field test site. Both observational and opinion data were collected by two observers from within the IVSS project staff and two observers outside project staff. At the time the field test was scheduled to begin, the computer program that was intended to provide interaction with the videotape player was still not functioning accurately and so the decision was made to continue with the formative evaluation and to run the program manually. One staff member followed along with the teacher and ran the equipment to simulate the actual program as closely as possible. Responses and code numbers were entered as necessary in order to access the scenes that were to be presented. At the conclusion of the 15-day formative evaluation all data from observers and comments from the teacher were collected and analyzed by the IVSS staff.

During the period of time the field test was being conducted, a supportive evaluation of the pilot IVSS program was conducted with a separate group of students. The purpose of this supportive evaluation was to reality check the scenes on the videotape as well as the necessity of the final checkout and the alternate versions of the discrimination training testing sequences. The site for this supportive evaluation was also in a local elementary

school resource room and involved 10 students. Without any training associated with the pilot IVSS program, the 10 students were individually run through the first version of the final checkout. The students were asked to answer "yes" or "no" if the scenes they watched were examples of cooperative interaction. The term "cooperative interaction" was not defined for them. If the students questioned the term they were just told to do the best they could. The students were then brought together as a group and shown a large sample of scenes from the videotapes. Following each scene presentation, an open discussion was held and the 10 students were encouraged to express their opinions. They were asked if the scene could really happen in school, home, etc. and if they had ever seen a similar situation. They were also encouraged to discuss how they felt about the quality of the acting in the scene, i.e., did it look real, phony, etc. Data from this supportive evaluation were also analyzed by the IVSS staff.

A second supportive evaluation of the pilot IVSS program was also conducted during this time period. The written portion of the pilot IVSS program was given to a resource teacher from a neighboring school district. The teacher was asked to read through the teacher's manual and to evaluate it in terms of its readability, organization, format, and to comment on the proposed instructional process. The teacher was asked to record all comments directly in the manual. Data from this supportive evaluation were also analyzed by the IVSS staff.

Results of the first preliminary field test. In general, results of the field test and the two supportive evaluations were positive. Information, concerns, and suggestions obtained are described below.

According to all the observers and the teacher, the teacher's manual did not answer all questions concerning implementation of program components, nor did it adequately cover all of the teaching strategies. The teacher failed to correctly interpret some sections of the teacher's manual.

Data collected from all observers suggested that there was too much repetition between the narrative material on the videotapes and teacher dialogue presented to students during each lesson as directed by the Day-by-Day Activities Guide in the teacher's manual. There was also strong evidence that too much time was spent teaching the target skills. The observers and the teacher felt that lesson material could have been taught in less time. By the fifth day students seemed bored with the process and lessons dragged.

Two sets of examples were used in the discrimination training. It was discovered, soon after the program was implemented, that the students were able to grasp the concepts quickly. Students mastered the skills when the first set was presented and did not require the added help the second set was designed to provide. As a result, the second set of examples was deleted.

The observers and the teacher expressed concern that the student voting process in the discrimination training section was flawed. It was impossible to tell if students were making independent selection or following the lead of the student who responded first. The observers and the teacher also expressed concern that student involvement was limited to "yes" and "no" responses during the direct instruction portion of each lesson. This appeared to make that portion of the lesson less time effective.

Results of the supportive evaluations. Results of the supportive evaluation (with the resource teacher in the neighboring school district) were extremely positive. There were only a few suggestions and these generally confirmed the results of the first preliminary field test. The second teacher responded similarly to the first teacher's reactions about the horizontal format, variation in font style, unclear directions, etc.

The supportive evaluation, involving ten students from a resource room, provided some additional information. Eight out of the ten students received a score of 90% or above on the final checkout without receiving any prior instruction. This supported information from the formative evaluation. Student opinion about the content and quality of the scenes was positive. Scenes were viewed as very realistic and related to similar situations that students had seen from their own experiences. The only scenes which students believed to be unrealistic were those showing extremely aggressive behavior or strong emotion.

The Second Pilot IVSS Project

Before attempting development of the final field test version of the IVSS program, it was decided to conduct an additional preliminary field test of the program. This decision was based on data collected during the previous field tests. Development of a second pilot IVSS program began immediately. This second pilot program was also produced on videotape.

Second preliminary field test. While program materials were being produced, preliminary arrangements were made for locating a site for field testing the second pilot IVSS program. The primary purpose of this second field test was to examine the appropriateness of the revised instructional process including all of the revised materials, i.e., the videotapes, the Day-by-Day Activities Guide, and teacher training materials. A local elementary school resource room involving one resource teacher and five emotionally disturbed students was selected as the field test site. This field test was conducted during the last half of July and the first part of August 1983. Two IVSS staff members collected baseline data for one week before implementing the program. Prior to beginning the program the teacher was also provided two training sessions. During the first session written material was presented to the teacher. The teacher was asked to read the information before the next training session. During the second training session the written information was discussed in more detail and

questions were answered. During the second session the teaching strategies were demonstrated. A group of three children were available for the demonstration to provide the teacher an opportunity to practice some of the techniques. The teacher was able to keep the written material and was encouraged to ask questions and request additional coaching sessions on any of the teaching strategies at anytime throughout implementation of the program. The teacher began implementing the second pilot IVSS program on the 18th of July and completed the lessons on the 4th of August. The equipment functioned well with few complications. Both observational and opinion data were collected by the two IVSS staff members. Both teacher and students were observed during the instructional sessions (Days 1-10) and during the observation periods outside of the instructional sessions (Days 6-10).

Results of the second preliminary field test.

Results of the second preliminary field test suggested that the modified IVSS program was effective. Information and comments gathered from the two evaluators and the teacher revealed few problems with the second pilot IVSS program. The teacher was pleased with the training she had received and felt she had been adequately prepared to teach the program. Only two problems were identified by the observers and the teacher: (a) Students had some difficulty imitating and rehearsing a few of the scenes presented during the rehearsal sequence and (b) The observers expressed concern

about the seating arrangements. Students were seated at their desks during the rehearsal sequence and role play sequence. Students had difficulty maneuvering around their desks while practicing the scenes for both the rehearsal and role play sequences. Consequently, the scenes for the rehearsal sequence were changed, and a suggested seating arrangement was added to the materials in the third and final version of the IVSS program.

Objective 4

Based on the results and conclusions of the two projects, a comprehensive integration plan will be developed from which the social skills curriculum will be modified to incorporate the videodisc components.

Following the preliminary field test and analysis of data, the staff immediately began the development of the third and final version of the IVSS program. The completed program is the program described in Section II.

Objective 5

Field test the total IVSS program with an emotionally disturbed population at the Children's Behavior Therapy Unit.

The final field test was conducted in resource rooms in a public school district. The decision to change populations was made so that the resulting program and research information would be applicable to a much larger population. This final field test is described in Sections IV, V, and VI.

SECTION IV

RESEARCH STUDY PROCEDURES

Timelines of Study

The study was conducted over an 18-week period beginning in January 1984. Figure 4 presents a timeline of the major activities conducted during the study.

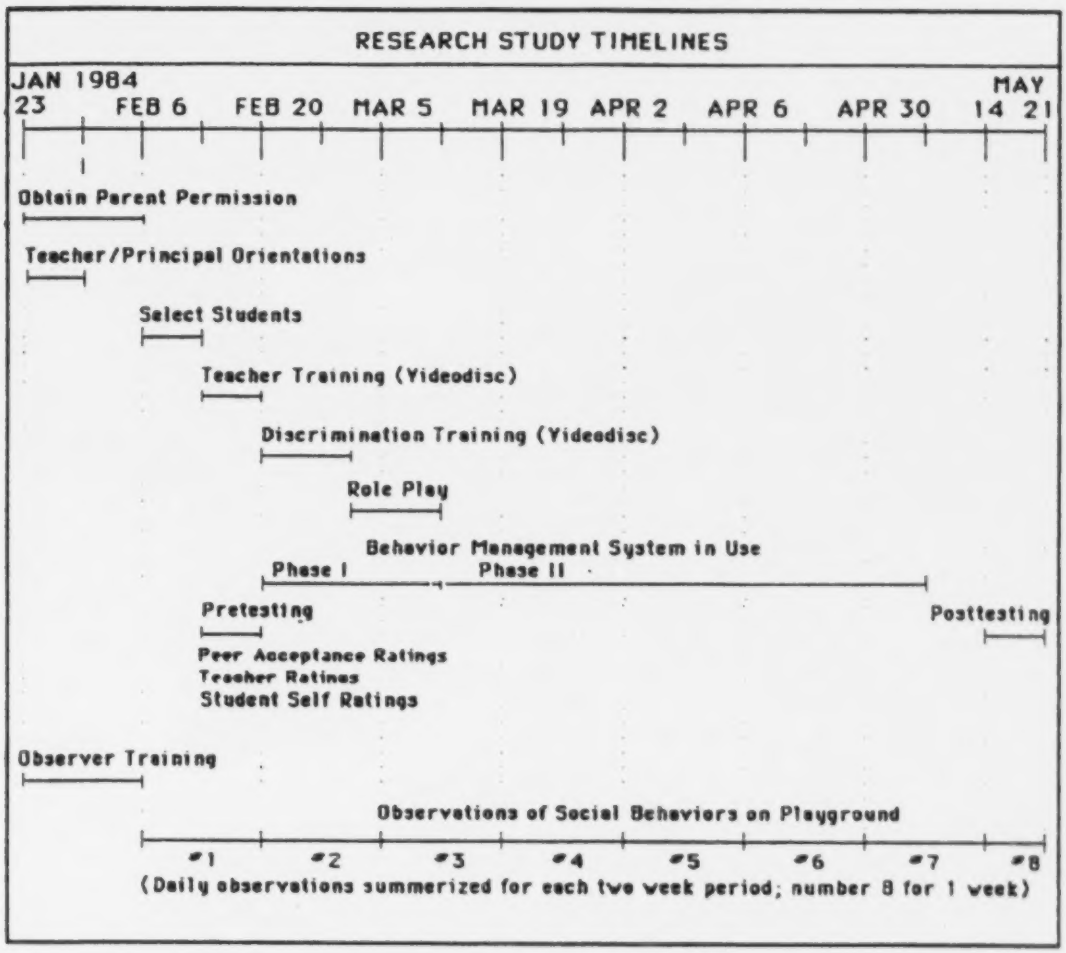

FIGURE 4. Major Activities and Timelines of Study

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Each of these activities are discussed in the following sections of this chapter.

Research Design

The effects of the social skills training program were tested using a pretest-posttest control group design with random assignment of classrooms to treatment groups. A graphic representation of this design is presented below:

Experimental Group	R	P1	T	P2
Control Group	R	P1		P2

R---Random Assignment to Groups
P1--Pretest
T---Treatment
P2--Posttest

This design controls for all internal and external threats to validity (Campbell and Stanley, 1963) except for pretest-treatment interaction. This validity threat was not considered a problem for several reasons: observational data on the control group was collected by the same procedures as the experimental group; none of the students knew why they were being observed; and the students were not aware of the reasons for the sociometric or self-esteem assessment.

Subjects

Administrators and teachers from six schools in a northern Utah school district agreed to participate in the

study. The school district is mostly rural and has approximately 12,000 students from middle and lower middle class families. The majority of the students are Caucasian, and all of the students in the sample were Caucasian. Socioeconomic status data were not collected because of the known homogeneity of the population.

Each of the six schools contains a resource room from which the subjects were selected and in which the social skills training was conducted. Resource rooms in Utah provide service to students identified as learning disabled or behaviorally handicapped. They function as pull out programs, that is, the student spends part of the school day in a regular classroom and part in the resource room. From 12 to 30 students might receive services in a resource room during the school day.

Subject Characteristics

Students assigned to resource rooms are first referred by their regular classroom teacher. The students are then tested, and if they are 40 percent below their class average in a subject, they are considered learning disabled and are admitted to the resource room program. Typically the behaviorally handicapped child is also a low performer. In these cases the behavior problem is considered the reason for the low performance and is expected to be treated in the resource room. Occasionally, behaviorally handicapped

children who are not low performers are placed in a resource room for treatment of their behavior disorders.

Selection and Classification of Subjects

Five students from grades 3, 4, and 5 were selected by each resource room teacher using the Behavior Selection Checklist (see Appendix A) developed by Walker (1983). The five students from each resource room with the highest scores on the checklist were selected for participation in the program. The resource rooms were then randomly assigned to either the experimental or control groups. Next, the students in each resource room were classified into three categories of peer acceptance: neglected, accepted, or rejected. The number of students by treatment group, grade, sex, and acceptance classification is shown in Table 1.

TABLE 1. Treatment Group Student Information

Trtmt Group	School	Number Students	Grade 3	Grade 4	Grade 5	Sex M	Sex F	Peer Acceptance Neg	Peer Acceptance Acc	Peer Acceptance Rej
Exprm.	1	5	1	4	0	4	1	2	0	3
Exprm.	2	5	2	3	0	5	0	4	1	0
Exprm.	3	5	1	1	3	5	0	0	3	2
Control	4	5	0	3	2	5	0	2	1	2
Control	5	5	1	0	4	4	1	1	2	2
Control	6	5	0	0	5	4	1	4	1	0

Neg = Neglected, Acc = Accepted, and Rej = Rejected

Even though the distribution of students from each grade was uneven between treatment groups, there was very

little relationship between grade level and the outcome variables. The range of correlation coefficients was between -.52 to .29. The correlation coefficient between grade level and the Walker Behavior Checklist (Resource Teacher) was -.52. This was the only statistically significant correlation coefficient. It was concluded that the uneven distribution of students by grade level did not significantly affect the outcomes.

In order to classify the subjects into peer acceptance categories, a peer nomination scale was administered in each of the 19 regular classrooms that contained one or more students from either the experimental or control groups. Every student was asked to nominate the three students in the classroom they liked to play with most (positive) and the three they liked to play with least (negative). A positive and negative score was determined for each student of each treatment group. The student's positive score was calculated by totaling the number of positive nominations received from his or her classmates. Negative scores were similarly calculated by totaling the number of negative nominations. Percentages were then calculated by dividing the total by the number of students in the class. Asher and Hymel (1981) recommend using both positive and negative nominations for classifying children as neglected or rejected.

The next step was to establish criteria for classifying each student into one of the peer acceptance categories. Specific criteria were not found in the literature. Suggestions for classifying students as neglected or rejected, however, were found in several studies (Asher & Hymel, 1981; French & Tyne, 1982; Gronlund & Anderson, 1957). Typical of these suggestions is the following by French and Tyne:

> Neglected children receive few positive nominations, and receive few if any negative nominations; as such they are low on both peer acceptance and peer rejection. Rejected children also receive few positive nominations, but are given a large number of negative nominations. They can be termed low on peer acceptance and high on peer rejection. (p. 287)

These suggestions were not sufficiently specific. Consequently, criteria for classifying students into peer acceptance categories were established by project staff.

Since the classifications were based on peer acceptance, project staff thought it appropriate to compare the treatment group students with their regular classroom peers. Comparison information was obtained by calculating positive and negative nomination scores for students who were not in one of the treatment groups, but were in one of the 19 classrooms that participated in the sociometric testing.

A total of 57 regular students were randomly selected from the 19 classrooms. Their nomination scores were then calculated using the same procedure used for calculating the nomination scores of the treatment group students. The mean

scores and standard deviations of the regular students' nomination scores were calculated for comparison purposes.

The nomination scores of treatment group students were compared with the scores of regular students. Several classification criteria were tried. In each case some students did not fit either the neglected or rejected classification. These students had too many positive nominations to be considered neglected or rejected. Therefore, a third category, accepted, was developed. Students in this category were accepted by their peers but identified by their teacher as having behavior problems. Table 2 presents the criteria used for the classifications.

TABLE 2. Criteria for Determining Peer Acceptance Classifications

Neglected -- when (Sn < (Mn + SDn)) and (Sp < Mp)
Accepted -- when (Sp > Mp)
Rejected -- when (Sn > (Mn + SDn)) and (Sp < Mp)

where:

Sn -- Treatment group student's negative nomination score
Sp -- Treatment group student's positive nomination score
Mn -- Mean score of the peer negative nomination scores
SDn-- Standard deviation of the peer negative nomination scores
Mp -- Mean score of the peer positive nomination scores

Based on these criteria, treatment group students were classified as neglected, accepted, or rejected. The numbers of students in each category are shown in Table 1.

Measures

Peer ratings, peer nominations, teacher ratings, student selfesteem ratings, and observational measures were used to assess the effects of the IVSS Program. Descriptive data on sex, grade, and type of handicap were also collected. All but the observational measures were administered one week before the beginning of the treatment and one week following the end of the treatment. The time between pre and post data collection was 13 weeks. The measures are described below. Copies of the measurement instruments are contained in Appendix A.

Sociometric Measures

Sociometric assessment is a procedure for measuring the attraction between individual members of specified groups. Several different types of sociometric measures have been developed, each of which is designed to measure how well children are liked or disliked by their peers. The two most common measures are peer nominations and peer ratingscales.

Asher and Hymel (1981) recommend using peer nominations to classify students as rejected or neglected and a peer ratingscale to measure overall peer acceptance. Both peer nomination and peer ratingscale measures were administered in each of the 19 regular classrooms containing one or more handicapped students from either the experimental or control groups. A scripted introduction and set of directions were

verbally presented to each class before the pre and post testing to insure accuracy and uninformity.

The peer nomination measure is described above in the section on classification of students.

The peer ratingscale measures the extent to which a group of students likes to play with any one student in the group. A five point "play with" scale was used in which a rating of one corresponds to "like to play with least" and a rating of five corresponds to "like to play with most". For both the pretest and posttest each student in each of the 19 mainstreamed classrooms rated every other student in the classroom. Thus, each treatment group student received a rating from each of his or her classmates. These ratings were then averaged to get a mean peer rating score for each treatment group student.

In a review of sociometric testing, Asher and Hymel (1981) concluded that sociometric tests were as stable over time as achievement tests. In a more recent, comprehensive review of sociometric testing, Mc Connell and Odem (in press) concluded that sociometric testing is adequately reliable with elementary children. In discussing peer nominations, they listed coefficients ranging from .39 to .89 over a range of time periods.

Peer ratings tend to yield higher reliability coefficients. Mc Connell and Odem (in press) reported a range from .75 to .90. They also concluded that even though

the reliability tends to be high for sociometric tests, there is a great deal of variance between studies and the reliability should be checked each time a sociometric measure is administered. In this study reliability was determined by correlating the control group's pretest and posttest scores for both nominations and ratings. The following reliability coefficients were obtained: (1) positive nominations, .64; (2) negative nominations, .86; and (3) peer ratingscale, .72.

Self Esteem

The instrument used to measure the students' self-esteem was the PiersHarris Children's SelfConcept Scale (Piers & Harris, 1969). This 80 item, selfreport instrument is the most commonly used measure of general self concept. Its testretest reliability was reported to be .72 (Piers, 1969). The pretestposttest reliability coefficient for the control group in the present study was .56. Students from both the control and experimental groups rated themselves on the PeirsHarris Scale.

Walker Problem Behavior Problem Identification Checklist (WPBIC)

The WPBIC (Walker, 1983) is used by teachers to identify problem behaviors in preschool and elementary age children. It contains 50 items and 5 subscales: acting out, withdrawal, distractability, disturbed peer relations,

and immaturity. All five subscales were administered.

Eighteight percent of the behaviors covered in the WPBIC were not covered in the IVSS Program. The WPBIC was administered to determine whether the social skills training was generalizing to behaviors not covered in the training program. Both resource and regular teachers completed the WPBIC. The testretest reliability of the WPBIC in previous research was reported to be .80 (Walker, 1983). In the present study the prepost reliability coefficients for the control group were .40 (resource teachers) and .89 (regular teachers).

Criterion Checklist

The criterion checklist was developed by the IVSS Project staff to assess the acquisition of skills taught by the IVSS program. The checklist has 19 items which are rated on a fivepoint scale. An item score of "1" indicates that the social skill specified by the item was not acquired and a score of "5" indicates the skill was completely acquired. Resource teachers in both the treatment and control groups completed the checklist.

The testretest reliability coefficient for the checklist was determined by having 18 special education teachers complete the checklist twice with one week between testings. The teachers were in a class taught weekly by one of the IVSS Project staff members. The reliability coefficient was

.83. Reliability of the checklist was also determined by correlating resource teachers' prepost ratings of the control group. The coefficient was .59.

Teacher Satisfaction Checklist

This checklist was developed by the IVSS Project staff to assess the regular teachers' satisfaction with the program. Its reliability was determined by having the same 18 teachers who completed the criterion checklist also complete this checklist. It was administered twice with one week between testings. The testretest reliability coefficient was .73. In this study the regular teachers completed the ckecklist, and the prepost reliability coefficient for the control group was .81.

Naturalistic Observation

Asher and Hymel (1981) consider naturalistic observation to be the most facevalid method of behavior assessment, particularly when specific skills are being assessed. In this study naturalistic observations were made to determine whether the skills were being acquired, whether the skills were being maintained, and whether different segments of the program had differential effects on the students' observed behavior.

The observation instrument used was a time interval observation procedure developed by Hops et al. (1978) to

assess the effectiveness of the PEERS Program. With this procedure behaviors are recorded at specific time intervals. Negative, Alone, Positive, and three types of positive behaviors are recorded. Only the first three were used in this study.

Seven observers were trained over a two week period to use the instrument. They practiced using the instrument with videotaped scenes of children in play situations. Observations were made at five second intervals. During the second week, interrater agreement using the videotape was calculated on 11 different trials using all possible pairs of raters. Interrater agreement was calculated by dividing the number of agreements by the total number of observations. The average for the 11 trials was 83 percent. A final trial was conducted on a playground with specified target children. The interrater agreement on this trial was 88 percent.

Six of the observers were assigned to schools and the seventh was used for checking reliability. The reliability checker randomly visited schools and observed with the regular observer. A total of 78 reliability checks were made. The overall agreement with the reliability checker and the regular observers was 93.4 percent.

The regular observers observed each child at least two times per week for five minutes per observation session for 15 weeks. Observations were made randomly at one of the

three recess periods. The observations of each student were summarized every two weeks for the first 14 weeks. The last summary was over a one week period (see Figure 2). the summary scores were mean scores of the students' observed behaviors during each two or one week period.

Treatment Fidelity

The resource room teachers of the students in the treatment group were observed over the 11 weeks of the program to determine the extent to which the treatment was implemented. IVSS Project staff members completed observation forms on the degree of implementation of each major treatment component. There was a separate interview form for each component and a percentage of implementation was calculated for each component. Additionally, at the end of the 11 weeks, the resource room teachers completed a questionnaire on treatment implementation. This questionnaire measured their perceptions about the extent to which the treatment was implemented. An interview was also conducted to determine whether the teacher training had been completed. The questionnaire and interview instruments are contained in Appendix A.

Control Group Procedures

Three resource teachers were randomly assigned to the control group. None of these teachers was using a formal

social skills training program prior to the beginning of the treatment. All of the resource room teachers of both treatment groups had a behavior management system in use. The control group teachers were asked to refrain from implementing a social skills training program until after the treatment had ended.

During the week following the end of the treatment, each control group teacher was asked to complete a questionnaire (see Appendix A). The questionnaire was used to determine the extent to which social skills were taught during the treatment period. All three control teachers reported that they had not used a social skills training program during the treatment period. All three had continued their behavior management procedures.

Data Analysis

Seven dependent and three independent variables were involved in the primary data analysis. These variables are listed in Table 3.

TABLE 3. Dependent and Independent Variables

Dependent Variables
1. Peer ratings
2. Peer nominations
3. Selfesteem
4. Walker Behavior ChecklistResource teachers
5. Walker Behavior ChecklistRegular teachers
6. Criterion checklist

7. Teacher satisfaction checklist
8. Observed peer interactions

Independent Variables

9. GroupsExperimental and Control
10. Type of peer acceptanceneglected, accepted, or rejected
11. Time of Measurement (repeated measures)

Data were also collected on grade, sex, and handicapping condition. These variables were not significantly correlated with any of the dependent variables and were not used in the analysis.

Statistical Analysis

The two major methods for analyzing the data were a two way analysis of covariance (ANCOVA), and a repeated measures analysis of variance (ANOVA).

The two factors for the ANCOVA were Group and Type (Variables 9 and 10 in Table 3). An ANCOVA was run on the seven dependent variables in Table 3. ANCOVA assumes homogeneity of variance and regression lines. As with ANOVA, however, ANCOVA is robust to homogeneity of variance (Glass, Peckham, & Sanders, 1972). This is particularly true if the numbers in each group are approximately equal and if there is not a significant difference between the groups on the covariate. A one way ANOVA was run on the pretest adminis tration of all seven dependent variables. No significant differences were found. Since there were 15 subjects in

each group, the homogeneity of variance assumption was met.

Homogeneity of regression was checked by running an ANOVA that calculated the interaction between the treatment groups and the covariate. Since there were no significant interactions, the homogeneity of regression lines assumption was satisfied.

The repeated measures ANOVA was run using Groups and eight sets of observation data collected at two week intervals. This analysis was run to determine if there was a significant interaction between the treatment groups and the time periods. A significant interaction effect would indicate that the observed behaviors of the students of the two treatment groups were increasing or decreasing at different rates. This analysis was used to assist in interpreting a graphical representation of the mean scores from each observation period of each group of students. Homogeneity of variance was not considered a threat for the same reasons mentioned for ANCOVA.

Unit of Analysis

The unit of analysis in this study could be either subject or classroom. The major criterion for determining the unit of analysis is independence of the treatment for each subject (Hopkins, 1982). Independence varied depending on which part of the treatment was being used. Since the treatment took place in small groups for the first three

weeks, independence cannot be assumed. The behavior management procedures were completely individualized, and were used throughout the entire 11 weeks of the treatment. During the last eight weeks, it was the only part of the treatment being used. Independence can be assumed for the behavior management part of the treatment.

Because it was not clear which unit of analysis to use, the statistical analyses were done both ways: by subject (n=30) and by classroom (n=6). Both analyses are reported and discussed when there are significant treatment group effects. Otherwise, only the analysis using student as the unit is presented.

Statistical Significance

An a priori alfa level was not established. The actual calculated probability level associated with each F score is reported and discussed.

Practical Significance

Effect size is reported for each analysis that has significant effects. Effect size is calculated by dividing the difference between the means of the treatment and control groups by the standard deviation of the pooled pretest scores. Effect size presents differences in standard deviation units. Effect size is considered an estimate of practical significance.

SECTION V

RESULTS

The first section of this chapter presents results of data analyses on the extent to which the program was implemented by the resource room teachers in the experimental group. Next, data analyses pertaining to each of the eight research questions are presented. Each data analysis was done twice: first using students (N=30) as the unit of analysis and then using classrooms (N=6) as the unit of analysis. The data analyses using students as the unit are reported. Where significant effects were found, the corresponding data analysis using classrooms as the unit of analysis is also reported.

Treatment Implementation

The extent to which the treatment was implemented was verified by observing the resource room teachers, and by having them complete a questionnaire at the end of the treatment.

Relevant data from the observations and questionnaires are presented in Table 4. Each of the numbers in Table 4 represent a percent of implementation. One hundred percent means all aspects of a particular component of the program

was implemented according to the directions contained in the program manuals.

TABLE 4. Percent of Treatment Implementation by Resource Room Teachers

Tchr #	Observations					Questionnaires	Total (Quest and Obsrv)
	Program Components						
	Direct Inst	Role play	Peer Trng	Behv Mngt	Total Obsrv		
1	98.1	98.3	76.3	100.0	93.1	86.3	91.8
2	99.5	90.9	82.0	66.0	84.1	87.3	78.1
3	87.4	76.6	88.0	66.0	79.5	74.7	78.5

Each component of the program was relatively well implemented except for the behavior management component. Individual differences in teacher implementation were noted, with teacher 1's level being higher than the other two teachers.

Research Question 1

How well are the social skills taught in the IVSS Program learned by students, as perceived by their resource room teachers?

A checklist which assesses the acquistion of the social skills covered in the IVSS Program was completed by resource room teachers of both treatment groups before the treatment began and again 13 weeks later. Each item in the checklist was rated on a five point scale. An item score of 1

indicates the social skill specified by the item was not acquired and a score of 5 indicates the social skill was completely acquired. A mean item score was calculated for each child. Mean scores and standard deviations on this checklist are presented in Table 5.

TABLE 5. Mean Item Scores and Standard Deviations on IVSS Social Skills Checklist

Categories: Treatment Groups	Student Type	N	Pretest Means (SD)	Posttest Means (SD)	Adjusted Posttest Means
Experimental Students	Neglected	6	2.57 (.58)	3.37 (.52)	3.43
	Accepted	4	2.80 (.30)	3.48 (.33)	3.39
	Rejected	5	2.05 (.28)	3.06 (.58)	3.47
	Total Group Means (SD)	15	2.46 (.51)	3.30 (.50)	3.43
Control Students	Neglected	7	3.05 (.49)	2.89 (.54)	2.48
	Accepted	4	2.82 (.78)	3.01 (.65)	2.90
	Rejected	4	2.53 (.27)	3.09 (.45)	3.17
	Total Group Means (SD)	15	2.85 (.54)	2.98 (.52)	2.85

The students in the experimental group made a relatively large improvement in their social skills while the students in the control group made little improvement. Each

of the three experimental subgroups (neglected, accepted, and rejected) made gains relative to the control group.

A two way analysis of covariance (ANCOVA) was used to test the statistical significance of these results. The results of the ANCOVA using student as the unit of analysis appear in Table 6. Only the treatment effect was statistically significant.

TABLE 6. Two Way Analysis of Covariance on IVSS Social Checklist Posttest with the Pretest as the Covariate

Source of Variation	MS	DF	F	Prob.
Regression	2.58	1	15.81	.001
Treatment Group (T)	2.40	1	14.71	.001
Student Type (S)	.26	2	1.56	.232
T X S	.29	2	1.79	.190
Within	.16	23		

An analysis was done using classroom as the unit of analysis. The means and standard deviations for each classroom are reported in Table 7.

TABLE 7. Mean Score and Standard Deviation for Each Classroom on IVSS Social Skills Checklist

Categories Treatment Groups	Classroom Number	N	Pretest Means (SD)	Posttest Means (SD)	Adjusted Posttest Means
Experimental Classroom	#1	1	2.09 (.38)	3.34 (.55)	NA
	#2	1	2.79 (.48)	3.39 (.59)	NA
	#3	1	2.49 (.48)	3.16 (.41)	NA
	Total Group Means (SD)	3	2.46 (.51)	3.30 (.50)	3.35
Control Classrooms	#4	1	3.18 (.78)	3.36 (.50)	NA
	#5	1	2.51 (.25)	3.01 (.48)	NA
	#6	1	2.85 (.27)	2.55 (.22)	NA
	Total Group Means (SD)	3	2.85 (.54)	2.98 (.52)	2.93

Note: Student N = 5 in each classroom

Table 8 presents an ANCOVA using classes as the unit of analysis.

TABLE 8. Analysis of Covariance on IVSS Social Skills Checklist Posttest with Pretest as the Covariate

Source of Variation	MS	DF	F	Prob.
Regression	.01	1	.06	.816
Treatment Groups	.18	1	1.60	.295
Within	.11	3		

The significant treatment group effect for student as the unit of analysis (see Table 7) is not present when class is used as the unit.

Research Question 2

Do trained students exhibit more positive behaviors than untrained students immediately after the direct instruction and role playing parts of the treatment have been completed?

Research Question 3

Does the use of only the behavior management system by resource room teachers maintain positive behaviors over a three month period?

Research questions 2 and 3 are closely related and, therefore, the data analyses pertaining to them are presented together.

The peer interaction behaviors of students from both the experimental and treatment groups were observed by

trained observers. Observations began two weeks before the beginning of the treatment and continued for the next 15 weeks of the study. Observations were made during recess on the playground, and each child was observed for five minute periods at least twice a week. Each five minute period resulted in about 70 five second observation intervals in which a student was recorded as being engaged in a positive or negative interaction with a peer or as being alone.

The frequency of each observed behavior during a recess period was divided by the total number of observations for that period to yield a percentage. Every two weeks the percentages were averaged into one mean percentage score for each type of behavior. Since week 15 was an odd week, a mean percentage score was calculated for that week only. Over the 15 weeks this resulted in eight sets of scores for each target student.

The percentage of observed negative behaviors was negligible--only about two percent of the observations. Observed negative interactions amounted to only about six percent of the non-positive observations. Typically if the student was not alone, he or she was engaged in a positive behavior. Therefore, only the percentage of positive behavior for each two week period is presented here.

Table 9 presents the mean scores and standard deviations for each of the eight two-week observation periods. These means are graphically represented in Figure

5. As is readily apparent from both Table 9 and Figure 5, the students in the control group had more positive social interactions than did students in the experimental group for all but the last two observation periods. Also presented in Figure 5 are the best fit regression lines for each group's mean scores. These lines were mathematically fitted to the mean scores for each group over the eight time periods.

TABLE 9. Means and Standard Deviations of Observed Positive Behaviors for Eight Two Week Periods for Experimental Control Group Students

Observation Periods	Experimental Group Means(SD)	Control Group Means(SD)
#1	31.28 (19.83)	43.14 (18.23)
#2	44.56 (28.69)	52.84 (27.20)
#3	50.00 (28.93)	65.64 (25.12)
#4	65.08 (30.03)	72.74 (23.67)
#5	57.65 (31.37)	69.80 (27.03)
#6	51.26 (28.74)	77.12 (16.35)
#7	64.65 (20.59)	58.79 (26.66)
#8	72.33 (20.36)	56.94 (39.27)
Total Means	54.60	62.12

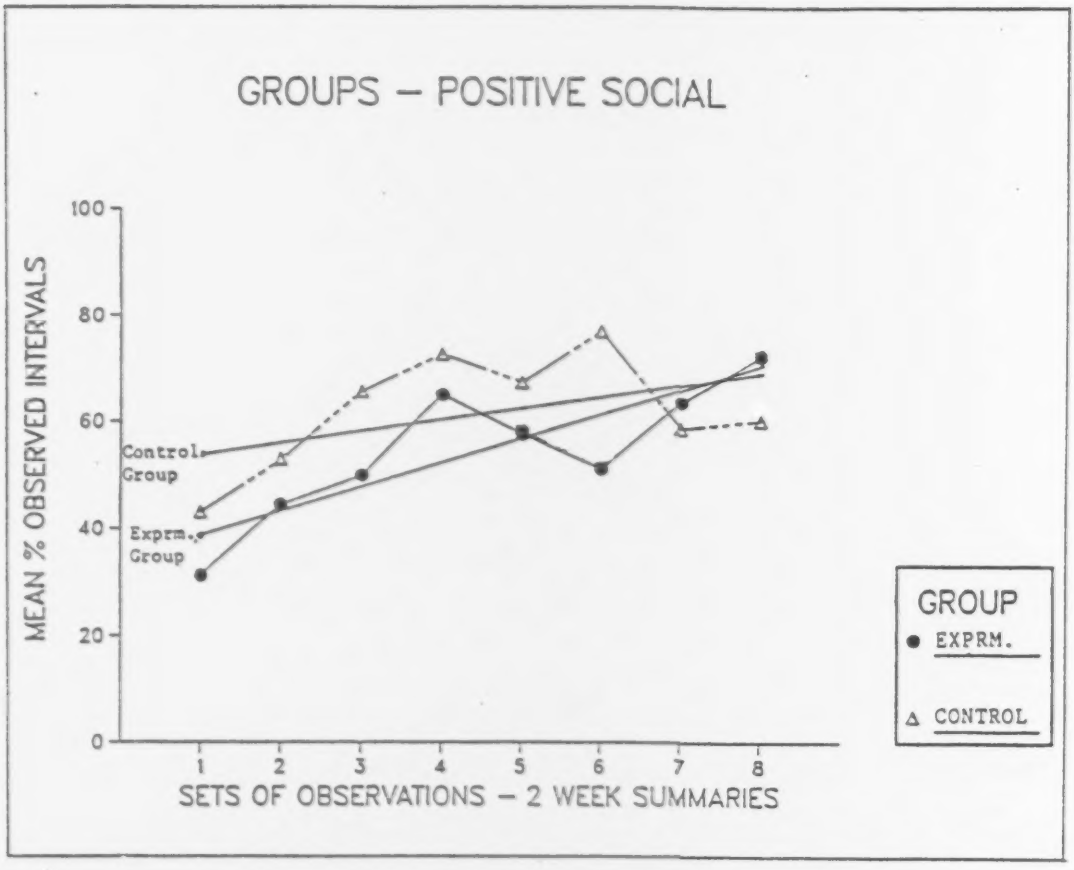

FIGURE 5. Percent of Observed Positive Social Interactions for Treatment and Control Groups over Sixteen Weeks. Best Fit Regression Lines for Each Group.

Even though the experimental group students made substantial increases over the first two periods, the percentage of positive scores for the students in the control group remained higher. The mean scores of the experimental and control group students were not significantly different.

An ANCOVA was used to determine whether the mean scores of the treatment groups on the last set of

observations differed significantly. This analysis is presented in Table 10.

TABLE 10. ANCOVA on the Eighth Set of Observational Scores with the First Set of Observational Scores as the Covariate

Source of Variation	MS	DF	F	Prob.
Regression	268.24	1	.28	.610
Treatment Group (T)	2036.22	1	2.03	.166
Within	1004.75	27		

The mean scores of the treatment group were greater than those of the control group but not significantly greater.

A repeated measures analysis of variance was used to determine if the regression lines were parallel. This analysis is presented in Table 11.

TABLE 11. Repeated Measures Analysis of Covariance on Eight Sets of Observations of Positive Social Interactions

Source of Variation	MS	DF	F	Prob.
Treatment Group (T)	3399.49	1	1.74	.197
Within Students	1952.30	28		
Observations (O)	3280.53	7	6.37	.000
T X O	1229.02	7	2.39	.023
Within Observations	515.29	196		

The significant interaction of treatment groups and observations indicate that the regression lines are not parallel. A trend analysis was also conducted to determine if there is a significant linear trend in the mean score of the observations of the experimental group. This analysis is presented in Table 12.

TABLE 12. Trend Analysis of Experimental Group Scores on Eight Sets of Observations of Positive Social Interactions

Source of Variation	MS	DF	F	Prob.
Linear Regression	13176.00	1	18.81	$p < .01$
Deviation from Linear	832.56	6	1.19	$p > .05$
Within	700.46			

The results of the trend analysis indicate a significant linear trend in the mean scores of the positive social observations in the experimental group. The significant *F* for the Linear Regression term indicates a significant trend, and the nonsignificant *F* value for Deviation from Linear term indicates the trend is linear.

Research Question 4

Do trained students show a greater increase in peer acceptance than untrained students?

A peer acceptance rating scale was administered to determine the extent to which a group of students like to play with any one student in the group. A five point "play

with" scale was used in which a rating of 1 corresponds to "like to play with least" and a rating of 5 corresponds to "like to play with most."

Table 13 presents the means and standard deviations for the pre and post tests for peer acceptance ratings. Students in the experimental group gained slightly in peer acceptance while students in the control group declined moderately. Also presented in Table 13 are the means and standard deviations from a sample of nonhandicapped students. These students were from the same 19 classrooms as the treatment group students. The nonhandicapped peers also declined slightly.

TABLE 13. Mean Scores and Standard Deviations for Treatment Groups and Type of Student on Peer Acceptance Ratings

Categories: Treatment Groups	Student Type	N	Pretest Means (SD)	Posttest Means (SD)	Adjusted Posttest Means
Handicapped Students					
Experimental Group	Neglected	6	2.41 (.68)	2.67 (.48)	2.75
	Accepted	4	3.22 (.46)	3.22 (.51)	2.86
	Rejected	5	2.06 (.43)	2.14 (.45)	2.42
Total Group Means (SD)		15	2.51 (.70)	2.64 (.62)	2.68
Control Group	Neglected	7	2.67 (.34)	2.37 (.39)	2.32
	Accepted	4	2.86 (.19)	2.83 (.27)	2.66
	Rejected	4	2.24 (.72)	1.74 (.30)	1.92
Total Group Means (SD)		15	2.60 (.48)	2.33 (.52)	2.30
Nonhandicapped Students					
Experimental Schools		28	3.09 (.43)	3.00 (.77)	
Control Schools		27	3.18 (.46)	3.00 (.40)	
Total School Means (SD)		55	3.14 (.45)	3.00 (.59)	

The results of an ANCOVA using student as the unit of analysis appears in Table 14. The treatment effect was statistically significant. The effect size was .64 indicating that the difference between the adjusted posttest mean scores were 64 percent of the standard deviation of the rating-scale pretest.

Table 14 indicates that the effect of student types was also statistically significant. A post hoc analysis using the Scheffe test revealed that accepted students had significantly higher posttest ratings than rejected students.

TABLE 14. Analysis of Covariance on Peer Acceptance Rating Posttest with the Pretest as the Covariate, n = 30

Source of Variation	MS	DF	F	Prob.
Regression	1.83	1	18.79	.000
Experimental Group (E)	1.03	1	10.27	.004
Student Type (S)	.48	2	4.96	.016
E X S	.05	2	.54	.590
Within	.09	23		

An analysis was done using classroom as the unit of analysis. The means and standard deviations for each classroom are reported in Table 15.

TABLE 15. Mean Score and Standard Deviation for Each Classroom on Peer Acceptance Ratings

Categories Treatment Groups	Classroom Number		Pretest Means (SD)	Posttest Means (SD)	Adjusted Posttest Means
Experimental Classrooms	#1	1	2.33 (.48)	2.36 (.43)	NA
	#2	1	2.39 (.76)	2.76 (.51)	NA
	#3	1	2.81 (.85)	2.81 (.86)	NA
	Total Group Means (SD)	3	2.51 (.70)	2.64 (.62)	2.69
Control Classrooms	#4	1	2.45 (.61)	2.03 (.33)	NA
	#5	1	2.49 (.51)	2.27 (.72)	NA
	#6	1	2.86 (.21)	2.69 (.19)	NA
	Total Group Means (SD)	3	2.60 (.47)	2.33 (.52)	2.29

Note: Student N = 5 in each classroom

The results of the ANCOVA using class as the unit of analysis is presented in Table 16. The treatment effect is not statistically significant at the conventional level (.05) but approaches it.

TABLE 16. Analysis of Covariance on Peer Acceptance Rating Posttest with Pretest as the Covariate

Source of Variation	MS	DF	F	Prob.
Regression	.13	1	3.12	.175
Treatment Groups	.23	1	5.52	.100
Within	.04	3		

Research Question 5

Do trained students show a greater increase in self-esteem than untrained students?

Self-Esteem was measured by the Peirs-Harris Children's Self-Concept Scale. This instrument is a self report measure consisting of 80 items. A student's score can range from 0 to 80 with higher scores indicating higher self-esteem.

The mean scores and standard deviations for each treatment group and student type are shown in Table 17. The experimental and control groups had virtually no change in their self-esteem. Some subgroups, however did make changes. The accepted students in the experimental group increased in self-esteem while the accepted students in the

control group decreased in self-esteem. There was a fairly large decrease in self-esteem for the rejected-control group students while the rejected-experimental group students decreased in self-esteem only slightly.

TABLE 17. Mean Scores and Standard Deviations on Self-Esteem

Categories: Treatment Groups	Student Type	N	Pretest Means (SD)	Posttest Means (SD)	Adjusted Posttest Means
Experimental Students	Neglected	6	54.17 (13.03)	52.50 (17.48)	51.47
	Accepted	4	56.00 (7.53)	61.25 (6.70)	58.62
	Rejected	5	46.60 (7.99)	43.00 (10.95)	48.59
	Total Group Means (SD)	15	52.13 (10.39)	51.67 (14.37)	52.89
Control Students	Neglected	7	43.43 (11.90)	51.71 (9.09)	60.09
	Accepted	4	55.50 (17.94)	48.25 (20.07)	46.05
	Rejected	4	62.25 (10.94)	48.75 (21.84)	40.64
	Total Group Means (SD)	15	51.67 (15.01)	50.00 (15.06)	48.92

The neglected-experimental group students decreased slightly in self-esteem while the neglected-control group students increased moderately.

The results of the ANCOVA are presented in Table 18. The treatment effect was not significant, but the student type effect and interaction effect approached statistical significance. The adjusted main effect posttest mean scores for student type were (1) neglected, 55.78; (2) accepted, 52.33; and (3) rejected, 44.62. The self-esteem of the rejected students was considerably lower than the neglected students.

TABLE 18. Two Way Analysis of Covariance on Self-Esteem Posttest with the Pretest as the Covariate

Source of Variation	MS	DF	F	Prob.
Regression	2642.20	1	23.06	.000
Treatment Group (T)	11.87	1	.10	.750
Student Type (S)	324.57	2	2.83	.079
T X S	296.40	2	2.59	.097
Within	114.56	23		

Research Question 6

Do resource room teachers rate the trained students as having fewer negative behaviors than untrained students?

The Walker Behavior Checklist was completed by the target students' resource room teachers. Scores can range from 0 to 98 with higher scores indicating more negative behaviors. The scores of the target students ranged from 7 to 78 on the pretest and 2 to 59 on the posttest. The mean

scores and standard deviations for treatment groups and student types are reported in Table 19.

TABLE 19. Mean Scores and Standard Deviations on Walker Behavior Checklist--Resource Teachers

Categories: Treatment Groups	Student Type	N	Pretest Means (SD)	Posttest Means (SD)	Adjusted Posttest Means
Experimental Students	Neglected	6	31.33 (14.38)	13.00 (12.96)	12.07
	Accepted	4	19.25 (2.99)	16.00 (4.32)	17.21
	Rejected	5	45.60 (20.13)	19.20 (11.26)	15.76
	Total Group Means (SD)	15	32.87 (17.42)	15.87 (10.38)	15.01
Control Students	Neglected	7	14.57 (7.46)	11.85 (6.91)	13.89
	Accepted	4	17.25 (6.65)	18.75 (7.18)	20.31
	Rejected	4	29.75 (11.76)	17.75 (6.85)	17.11
	Total Group Means (SD)	15	19.33 (10.32)	15.27 (7.25)	17.10

The experimental group students had a very substantial decline in the incidence of negative behaviors, whereas the control group students remained about the same. Substantial differences between accepted, rejected, and neglected students were observed on the pretest administration of the

checklist. Much less difference between student types was observed on the posttest administration.

Table 20 shows the results of the ANCOVA on these data. No significant effects were found.

TABLE 20. Two Way Analysis of Covariance on Walker Behavior Checklist Posttest with the Pretest as the Covariate Resource Teachers

Source of Variation	MS	DF	F	Prob.
Regression	110.98	1	1.36	.255
Treatment Groups (T)	17.31	1	.21	.649
Student Types (S)	87.88	2	1.08	.357
T X S	1.62	2	.02	.980
Within	81.46	23		

Even though there were large pretest differences, the regression effect was quite small. Consequently, very little adjustment was made to the posttest mean scores.

Research Question 7

Do regular room teachers rate trained students as having fewer negative behaviors than untrained students?

The Walker Behavior Checklist was used again in this analysis but was completed by the target students' regular classroom teachers. The means and standard deviations for treatment groups and student types are reported in Table 21.

TABLE 21. Mean Scores and Standard Deviations on Walker Behavior Checklist--Regular Teachers

Categories: Treatment Groups	Student Type	N	Pretest Means (SD)	Posttest Means (SD)	Adjusted Posttest Means
Experimental Students	Neglected	6	27.00 (13.73)	16.17 (10.44)	17.57
	Accepted	4	25.00 (7.53)	20.25 (21.96)	22.66
	Rejected	5	45.2. (27.22)	34.80 (9.36)	26.97
	Total Group Means (SD)	15	32.53 (19.44)	23.47 (15.46)	22.41
Control Students	Neglected	7	13.86 (7.08)	19.57 (5.25)	27.63
	Accepted	4	28.25 (19.10)	19.75 (15.86)	20.52
	Rejected	4	48.75 (13.33)	42.25 (15.59)	35.64
	Total Group Means (SD)	15	27.00 (18.97)	26.47 (15.98)	27.93

There was a moderately large decrease in negative behaviors in the experimental group as perceived by the regular teachers. The teacher's ratings of the control group students remained about the same.

The results of the ANCOVA on these data are presented in Table 22. No significant effects were obtained.

TABLE 22. Two Way Analysis of Covariance on Walker Behavior Checklist Posttest with the Pretest as the Covariate Regular Teachers

Source of Variation	MS	DF	F	Prob.
Regression	1539.22	1	14.44	.001
Treatment Group (T)	243.13	1	2.28	.145
Student Type (S)	164.87	2	1.55	.234
T X S	97.39	2	.91	.415
Within	106.63	23		

Research Question 8

Are the regular teachers more satisfied with the trained students' behavior than with untrained students' behavior?

The regular teachers' satisfaction with the target students' social skills was measured by the Teacher Satisfaction Checklist. Each of the 20 items on the checklist represent a social skill covered in the IVSS program. A five point scale was used to rate each student on each item. The scale ranges from (1) "Completely Dissatisfied" to (5) "Completely Satisified." Each student's score was derived by calculating the mean of his or her 20 item scores. A higher score indicates greater teacher satisfaction with a student's social behavior.

Table 23 contains the means and standard deviations for the Consumer Satisfaction Checklist.

TABLE 23. Mean Scores and Standard Deviations on Consumer Satisfaction

Categories: Treatment Groups	Student Type	N	Pretest Means (SD)	Posttest Means (SD)	Adjusted Posttest Means
Experimental Students	Neglected	6	2.53 (.83)	2.74 (.60)	2.87
	Accepted	4	3.14 (.35)	3.31 (.72)	3.09
	Rejected	5	2.47 (.59)	2.96 (1.32)	3.13
Total Group Means (SD)		15	2.67 (.68)	2.97 (.89)	3.03
Control Students	Neglected	7	3.12 (.34)	2.89 (.34)	2.68
	Accepted	4	3.10 (1.05)	3.43 (.67)	3.23
	Rejected	4	2.09 (.32)	2.39 (.35)	2.78
Total Group Means (SD)		15	2.84 (.73)	2.90 (.75)	2.89

The students in the experimental group made moderate gains in social skills as perceived by their regular teachers while the control group students remained at their pretest level. All student types in the experimental group showed some gain while neglected and accepted students in the control group had declines in teacher satisfaction.

Table 24 presents the results of the ANCOVA on these data using student as the unit of analysis. No significant effects were found.

TABLE 24. Two Way Analysis of Covariance on the Consumer Satisfaction Checklist Posttest with the Pretest as the Covariate Regular Teachers

Source of Variation	MS	DF	F	Prob.
Regression	3.21	1	7.75	.011
Treatment Group (T)	.20	1	.48	.494
Student Type (S)	.37	2	.89	.423
T X S	.13	2	.31	.736
Within	.41	23		

SECTION VI

SUMMARY AND CONCLUSIONS

Using a Videodisc in Social Skills Training

The use of the videodisc is the most distinctive feature of the IVSS Program. No other social skills training program and very few training programs of any kind have used a videodisc. The videodisc was included in the IVSS Program as an experiment. The grant that funded the development of the program was provided to explore the use of videodisc technology.

The original design of the IVSS Program included extensive branching. The idea was to present a scene of a social situation, have the student make a decision about how they would react to the situation, and then present a chain of consequences based on his or her decision. This training technique would have used the exclusive branching capabilities of the videodisc player. The plan was abandoned, however, because the time-consuming chain of decision-consequence branching caused the students to forget the original social situation and the associated social skill being taught. Also, the number of social situations that would have to be developed and filmed for the branching sequences was prohibitively large for the grant budget. The

program was redesigned without use of decision-consequence branching, and the present IVSS Program is the result.

Because the present IVSS Program is fairly linear, videotape training would probably have been as effective as the videodisc. There is no doubt, however, that the videodisc enhanced the quality of the presentations and the efficiency of using the system. The videodisc has all the presentation capabilities of videotape, and in most cases they are greatly improved. Searching to material on the videodisc is almost immediate, still frame quality is excellent, and still frame presentation does not cause wear on the videodisc or player. In comparison, videotape searching is slow, still frame quality is poor, and presenting still frames causes excess wear on both the videotape and player. The IVSS Program does not require extensive branching, but it does require some searching and numerous presentations of still frames.

In the future, the decision to use videotape or videodisc should be made by (1) comparing the costs associated with using the two technologies, (2) determining the potential for use in the schools, and (3) analyzing the extent to which the capabilities of the videodisc will be used.

Videotape and videodisc players are now approximately the same cost, but a videodisc is more expensive to produce. A videodisc must be made from a videotape. The cost of producing a videodisc from a videotape is approximately two

thousand dollars per side. This is called pressing the videodisc. Reproductions of the videodisc can be made as inexpensively as eight dollar per videodisc in quantities of 2,000 or more. Thus, videodiscs are very cost-effective when produced in quantity.

The non-availability of videodisc players in the schools is the major reason for using videotape rather than videodisc. Numerous videotape players are presently available in the schools, whereas videodisc players are almost nonexistent. Therefore, if the training program is to have an immediate impact in the schools, videotape is the medium of choice. A videotape version of the IVSS program is being considered for immediate distribution.

If extensive branching or presentation of still frames is desired in a training program, the videodisc is clearly the best medium. The producer of the videodisc training may have to bear the cost of waiting for a market, but at the same time, he or she will be helping to create the market. Making effective videodisc training programs available is the only way to get schools to purchase videodisc players. The videodisc is ultimately a better technology than videotape. The expense of producing a videodisc should be greatly reduced within the next two years. Consequently, more training programs should become available. It is expected that schools will start purchasing videodisc players in large quantities when sufficient training

programs become available. It seem reasonable then for instructional developers to consider the videodisc as a viable technology within the near future.

It is not clear how much the videodisc contributed to the IVSS program. The videodisc materials are integrated into the program and are very dependent on the associated print materials. Therefore, it would be very difficult to assess the impact of the videodisc training component independently of other IVSS components. The research on computer assisted instruction (CAI) is instructive in this respect. Reviews of research on the effectiveness of CAI has found that it is most effective when used as a supplement but not a replacement to traditional teaching materials and methods (Forman , 1982; Gleason, 1981).

The IVSS program is consistent with the CAI research findings. The videodisc was used for those aspects of the instruction that were difficult to present with printed materials or verbal descriptions, and print material was used when it could efficiently convey the intended message. The teacher was used throughout the program and was essential to the instruction.

IVSS Program Effectiveness

Each of the findings of the study are discussed in this section. The section is organized by outcome. Each outcome is discussed in relation to how it was measured, its

importance to the study, and how it might be affected with different or additional training procedures.

Peer Acceptance

The most important finding of the study is the apparent improvement in peer acceptance of handicapped students in the experimental group. The IVSS program was specifically designed to teach social skills that would improve peer acceptance of handicapped children by their nonhandicapped peers. The results of the analysis of peer acceptance scores indicate a slight pre-post improvement in the experimental group (2.51 to 2.64) and a moderate pre-post decline in the control group (2.60 to 2.33). Similar to the control group, the mean scores of sample of nonhandicapped students' on the same peer acceptance measure also declined (3.14 to 3.00).

Nothing was found in the sociometric literature to explain this decline in the students' acceptance of each other. A possible reason may be found in the fact that the study was conducted from January to May. It is commonly believed that elementary students become less interested in school during the second half of the school year, especially as summer approaches. Indeed researchers have found a deterioration of students' attitudes toward school as the school year progresses (Flanders, 1970).

The general decline in peer acceptance for control handicapped students and nonhandicapped students lends significance to the fact that the experimental group students improved or held their own over the same time period. This finding suggests that the IVSS Program was having an effect on students' peer acceptance. The effect was not to make the students better accepted by their peers, but rather to help them to maintain the acceptance level that they had achieved earlier in the school year. Further research is needed to determine whether the IVSS program would improve rather than just maintain peer acceptance if it were instituted early in the year.

It appears that the social skills training was more effective in improving peer acceptance for neglected students than accepted or rejected students. Neglected students showed a moderate increase (2.41 to 2.67) while accepted students remained the same and rejected students improved only slightly (2.06 to 2.14). Neglected students are known to be less skilled in appropriate social behaviors than accepted and rejected students. Rejected students and accepted students who are having behavior problems generally possess the skills but do not choose to use them. It may be that the social skills training is more effective in teaching new skills than it is in motivating children to use the skills they already possess.

The social skills taught in the IVSS program were specifically selected because they were known to be related to peer acceptance. It appears that training in these skills can be influential in positively affecting peer acceptance; however, the skills taught are primarily used in freetime activities. Since peer interactions are prevalent in the classroom, teaching classroom skills may be equally important. Teaching classroom skills such as "not speaking out of turn" in addition to the cooperative interaction skills may have an additive effect on peer acceptance. Also training nonhandicapped peers to work with the handicapped students may be influential in increasing peer acceptance. The peer training component used in this study was minimally implemented; however, preliminary findings from an investigation of the effectiveness of this component suggest that it may be an important part of social skills training. Depending on the results of this investigation, the peer training component may be further developed and included as an integral part of the IVSS program.

Social Skills

Behavioral observations. The interpretation of the observational data presents a dilemma since the control group was substantially higher in observed positive behaviors before the IVSS program started and remained higher until the next to the last observation period. The

initial difference can be attributed to chance since the groups were randomly assigned. The continued improvement of the control group is more difficult to explain.

In an attempt to determine the cause for the increase in positive behaviors of the control students, the resource teachers of these students were interviewed. They claimed they had not implemented a formal social skills training program during the study. They did continue, however, with their existing behavior management system. It is possible that the behavior management system was strong enough to improve the students' positive behaviors. Improving positive social behaviors in students is a goal of most teachers and is generally expected of special education teachers. The control teachers may have intensified their behavior management system to meet this expectation. Since the control group teachers were all from one school district, there may have been subtle pressures to improve their students' social skills. The only means available to them was their behavior management system. Intensive use of a behavior management system by the control teachers might account for the increased positive behaviors of the control group students.

Behavior management systems have been found to be effective as a training method in a number of studies. The continued improvement of the control group students supports these previous findings. Further evidence of the

effectiveness of the IVSS behavior management system is the fact that the experimental group students continued to increase in positive behaviors for 10 weeks while only the IVSS behavior management system was in effect.

The steady increase in positive behaviors of the control group continued for only the first half of the study (eight weeks). They then leveled off for four weeks and declined during the last three weeks. The experimental students also leveled off at the same time as the control students but increased during the last three weeks. This finding suggests that social skills training enhances the effectiveness of a behavior management system.

Support for this conclusion is found in a study by Walker and collegues (1983). They conducted a training experiment and found that a treatment consisting of training and behavior management was superior to a treatment consisting of behavior management only. (Both treatments were superior to a no-training control condition.) The gains made in the Walker study did not, however, maintain over a two month period. They concluded that they should have continued the behavior management system even if it were on a minimal, low cost basis.

The findings of the IVSS study support this conclusion. The IVSS behavior management system that was in effect for the last nine weeks of the study was low cost since it

consisted of student self-evaluations that required minimal time of the teacher.

As with the measurement of peer acceptance, the measurement of positive behaviors and the effect of the behavior management system on these behaviors would be enhanced by conducting the study over a longer period of time.

Regular teacher ratings. The regular teachers of the treatment group students perceived a moderate decrease in negative behaviors (32.53 to 23.47) over the time period of the study. The control group students remained stable in perceived incidence of negative behaviors over the same time period. The regular teachers were only slightly satisified, however, with the improvement in the experimental group's cooperative interaction behaviors, as measured by the Teacher Satisfaction Checklist.

It may be that the regular teachers' criteria for satisfaction are based on dealing mainly with nonhandicapped students, and they expect to see social behaviors in the normal range. This interpretation is supported by comparing the posttest scores of the experimental groups on the Walker Behavior Checklist with the norms established for the checklist. This comparison reveals that the experimental group students remained high in negative behaviors (23.47), since a raw score of 12.00 or higher for this age group indicates continued evaluation or intervention is required.

Thus, even though there was considerable improvement, the experimental groups' posttest mean score was far above the level that would satisfy regular teachers.

The primary purpose of the IVSS training was to increase peer acceptance of handicapped students in mainstreamed classroom. In light of the regular teacher ratings, however, it seems even more important to include social skills training designed to improve classroom behaviors.

Resource teacher ratings. The resource teachers who participated in the IVSS program perceived a substantial improvement (2.46 to 3.30) in the social skills of their students. The control group students did not improve in the perceived acquisition of social skills over the same time period.

The neglected and accepted students made fairly substantial improvements (2.57 to 3.37 and 2.80 to 3.48, respectively), but the rejected students made the largest increase of all (2.05 to 3.06). This large increase can be explained by the fact that their pretest mean score was much lower than the other two groups, not because the program is more effective in teaching the IVSS social skills to rejected students.

The resource teachers also completed the Walker Behavior Checklist, and the results are somewhat perplexing. They perceived a substantial decrease in incidence of

negative social behaviors (32.87 to 15.87) in the experimental group, and only a slight decrease in negative social behaviors (19.33 to 15.27) in the control group. The difference between the adjusted posttest mean scores of the two groups, however, was not statistically significant. It appears that because of the low correlation between the pre and posttest scores (r = .27), the posttest mean scores were not adjusted appropriately.

Self-Esteem

The students of both the experimental and control groups did not show a change in self-esteem. There also were no differences in perceived self-esteem between the neglected, rejected, or accepted students.

Improvement of self-esteem was not an explicit objective for the training program. This fact, together with the finding of no treatment effect, supports the notion that students learn what has been specifically taught and are not likely to generalize acquired skills to different skills or attitudes.

Comparison with Other Social Skills Training Programs

Of the 18 social skills training studies reviewed, only the Walker ACCEPTS Program (Walker, 1983) was comparable to the IVSS program. The other training programs that were sufficiently described were not complete and not in a

"packaged" form. These programs would be difficult to replicate without the direct intervention of the developer.

The ACCEPTS Program is very similiar in training approach to the IVSS program. Both programs (1) teach peer-to-peer interaction skills, (2) use a direct instruction approach to designing and teaching the materials, (3) use small groups, (4) involve peers, (5) use nonhandicapped role models, and (6) have a systematic behavioral management system. The ACCEPTS Program uses videotape for modeling while the IVSS Program uses videodisc.

Two research studies have tested the effectiveness of the ACCEPTS Program. The first study involved the prototype version of the program, and the second involved a revised version. In many ways the findings were similiar to the findings of the IVSS study. Both of the ACCEPTS studies and the IVSS study found significant increases in the acquisition of social skills but only small non-significant increases in regular classroom teacher ratings. This finding again supports the notion that the social behavior expectations of the regular teachers are the same for both handicapped and nonhandicapped students.

Walker (1983) concluded that there was not much support for the program by the regular teachers. This lack of support by regular teachers was also observed in the IVSS study. There is evidence that the regular teachers are much more concerned with compliance behaviors than they are with

peer interaction behaviors (Walker & Rankin, 1985). It may also be that the regular teachers are sufficiently distant from the training and research activities that their perceptions are more objective than the perceptions of the resource teachers. This possibility merits further study.

The first ACCEPTS study found no significant treatment effects as measured by behavioral observations. In the second study, there were significant differences between the experimental and control groups on the observational post-test data, but not on maintenance data collected two months after the treatment.

The differences between the mean scores of the experimental and control groups in the second ACCEPTS study and the IVSS study were approximately the same. The amount of gain in observed positive behaviors in the IVSS program, however, was much greater than in the ACCEPTS study. In the ACCEPTS study the experimental group students had declined to below the control group students on the follow-up measure.

H. M. Walker (personal communication, July 27, 1984) concluded that an ongoing behavioral management system is necessary to maintain acquired social skills. This may help explain the continued improvement in positive interaction skills observed during the IVSS training which included the use of a behavioral management system for 11 weeks.

A major conclusion from both the IVSS and ACCEPTS studies is that social skills training and associated behavior management programs must be applied over a substantial period of time to move handicapped children to within the the normal range of social behavior.

The ACCEPTS program teaches classroom behavior skills in addition to a broader range of peer interaction skills than does the IVSS Program. If a potential user were interested in this broader range of skills, the ACCEPTS Program would be the program of choice. It appears that the IVSS Program may be more effective in teaching a narrower range of peer interaction skills. It is not possible at this time, however, to determine which approach will have the greatest effect on peer acceptance since peer acceptance was not assessed in either ACCEPTS study. The ACCEPTS program can be immediately used in a large number of schools because of its use of videotape rather than videodisc.

A strength of the IVSS program is that it is completely self-contained. The teacher training is an integral part of the program. In the IVSS study, the teachers were trained individually by the system without intervention from the project staff. The resource teachers had periodic questions that were answered by project staff, but these interactions were minimal. In a majority of the studies, including the ACCEPTS study, the training was conducted by the developers or specially trained staff. In the IVSS study the social

skills training was conducted by the resource room teachers. It is believed that this training procedure results in a more valid indication of how the program will do on its own.

Program Implementation

Table 4 indicates that there was a difference in the degree to which each resource teacher in the experimental group implemented the program. The major difference was that two of the teachers did not fully implement the behavior management system as instructed by the researchers.

Further analysis of the data was done to determine whether differences in teacher implementation affected the student outcomes. The implementation data from Table 4 were compared with the mean scores for each teacher on each of the measures (see Tables 25 and 26 in Appendix B). There was some correspondence with level of implementation but it was not substantial. Experimental group teacher 1 was rated highest on program implementation and also had the largest gain scores on more measures than the other two teachers. The experimental group teacher with the second highest implementation level, however, had the largest gain scores on the two most important measures--peer acceptance and behavioral observations. The third highest rated teacher had the highest gain score on the self-esteem measure.

There is some evidence, then, that implementation level affects student outcome, but it is not substantial.

Verification of the implementation of the behavior management system was not as rigorous as it could have been. Implementation level was determined by examining the extent to which the point cards were used rather than by observing the teacher. Since it is important to know the relative importance of the social skills training and the behavior management system, future research should employ a more comprehensive method for measuring implementation.

Recommendations for Further Research

The major recommentation for further research is that the treatment and the study be conducted over the entire school year. The treatment in the form of a low cost behavior management system may have to go on even longer. The fact that the control group began the study with much higher observed positive behaviors created a severe methodological problem. Matching on pretreatment observations might have alleviated some of these problems. The distribution of peer acceptance rating scores was fairly equal for all schools and therefore both treatment groups. It would be best, however, to match on peer acceptance as well as pretreatment observations before randomly assigning to groups.

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APPENDIX A

INSTRUMENTS AND QUESTIONNAIRES

Sociometric Testing: Examiner's Instructions

Introduction. "Hello. My name is _____. We are interested in learning about how children get along together at school. I'm going to pass out a list with all of your classmates' names on it. From this list, you can show me who you like to play with in your classroom. We won't be doing this out loud in a group, but you'll let me know your choices by marking them down on the list of names I'll give you. You can be honest because I won't show your answers to anyone. I'll be the only one who sees them. Before I pass out the lists, I'll show you how to mark your answers."

Rating Scale Sociometric. (Draw a series of faces on the board and distribute sheets with the series of faces to each child. Using the faces on the board, describe how the rating scale is used.)

"Look at the sheet I've given you. It has some faces on it like the ones I've drawn on the board. Let's see if we can figure out what the faces mean. The face up here with the number 5 is a real happy face. This face means you like to do something a lot. Down at this end, the face with the number 1 is a real sad face. It means you don't like to do something. This face in the middle with the number 3 is not happy or sad, but just okay. It means that sometimes you like to do something but sometimes you don't. The face over here at number 4 is a happy face, but not quite as happy as number 5. It says that most of the time you like to do something, but not all of the time. Over here, the face at number 2 is sad, but not quite as sad as number 1. It says you mostly don't like to do something, but sometimes you do."

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"Now let's see if everyone understands. Suppose I said, 'How much do you like to eat ice cream?' What number would you give ice cream?" (Wait for children to respond. Interpret the responses as they are given. For example, if the children say, "5," you say "That means that you like to eat ice cream a lot.") "What if I asked "How much do you like to eat spinach?" What number would you give spinach?" (Wait for responses and interpret them as before.) "What about ravioli?" (Wait for and interpret responses. If children do not respond with any of the middle numbers - i.e., 2, 3, 4, ask if anyone would give it a 2, 3, or 4, and then interpret what these numbers would mean.) "Some people like to eat ravioli, so they would give it a 4 or 5. Some people don't like to eat ravioli, so they might give it a 1 or 2. Other people might like to eat ravioli some of the time and some of the time they don't like to. They would give it a 3. Different people like different things. We don't all have to agree. So you can just pick the number that tells how you feel. Does everybody understand what the numbers mean?" (Wait for children to respond.) "Okay, now I will pass out the lists. Don't start until I tell you to." (Pass out the rating scales.)

"Now, if you look carefully at your piece of paper with the faces, you will see that it doesn't say, 'How much do you like to eat ice cream?' It says, 'How much do you like to play with this person at school?' This means playing only at school--not at home. You can play at school at recess on the playground, or in the gym during physical education, and sometimes you can play in the classroom."

"Now, I'll show you how to use these lists. First write your first and last name on the top of the first page where it says NAME." (Pause while children write their names.) "Now, everybody look down the list at all the

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names until you find your own name. Remember, there are two pages of names. If your name isn't on the first page, look at the second page. When you find your name, cross it out, all the way through all the numbers. You don't have to rate yourself." (Pause while children find their names, and help any children who cannot find their names.) "Now look at all the names on the list and make sure that you know who everybody is. If you don't know, please raise you hand and I can help you figure out who it is." (With the help of the teacher, assist any children who are unable to identify names.)

"Let's do two examples before you start. Remember, the question is, 'How much do you like to play with this person at school?" There is a name at the top of the first page: Louise Blue. Hold you sheet of faces under the numbers for that name like this." (Demonstrate) "The faces can help you remember what the numbers mean and will help you so you circle the right numbers. Let's pretend that Louise Blue is a girl in your class and you really like being in school activities with Louise. What number would you circle?" (Wait for children to respond. If any children do not understand, review the explanation.) "Okay. Everybody circle the number 5 for Louise Blue." (Pause while children circle the number.) "Good. Now look at the next name: Russell Grey. Hold the faces under Russell Grey's name. Let's pretend that Russell is a boy in your class. Sometimes you like to play with Russell but sometimes you don't. What number should you circle? (Wait for children to respond.) "Okay. Everybody circle number 3 for Russell Grey. (Pause while children circle the number.)

"Okay. Now I want you to go down the list and circle one number for each person in the class. Circle the number that tell how much you like to play

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with that person at school. Remember, circle only one number for each person on the list and hold your paper with the faces under each name so you can mark the right number for each person. You can be honest because no one will see your answers but me. Raise your hand if you have a question." (Wait while children complete the sociometric.)

"If you are done, check to make sure your name is at the top of the first page and that you have circled one number for every child on the list. Then raise your hand and I will collect your list." (Collect lists and sheets with faces on them. Check the lists to make sure that the child's name is at the top of the page and that one number has been circled for each name on the list. Have the children make corrections if necessary.)

Friendship Nomination Sociometric. "Okay. Now you have one more list to do. This time we'd like to find out who are your best friends in your classroom." (Pass out the class rosters to the children.) "The first thing I'd like you to do when you get the list is to write your first and last name on the line at the top of the page." (Pause while children write their names.)

"Now I'm going to tell you how to mark your answers. In the top three lines I'd like you to write the names of the three children you like to play with most in this class. Only write three names. Remember, three children you like to play with most in this class. If anyone is having trouble, please raise your hand and I will try to help you." (Pause while children complete the sociometric.)

"Now, on the bottom three lines, write in the name of three children from this class you probably would not play with. Then raise your hand, and I will collect your sheet." (As you collect the sheets, check to make sure that the child's name is at the top and that three names have been circled. Have children make corrections if necessary. When all materials have been collected, thank the children and the teacher for helping out.)

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"Play Rating" Sociometric

Name _____

EXAMPLES: How much do you like to play with this person at school?

	I don't like to				I like to a lot
Louise Blue	1	2	3	4	5
Russell Grey	1	2	3	4	5

HOW MUCH DO YOU LIKE TO PLAY WITH THIS PERSON AT SCHOOL?

	1	2	3	4	5
	I don't like to				I like to a lot
1.	1	2	3	4	5
2.	1	2	3	4	5
3.	1	2	3	4	5
4.	1	2	3	4	5
5.	1	2	3	4	5
6.	1	2	3	4	5
7.	1	2	3	4	5
8.	1	2	3	4	5
9.	1	2	3	4	5
10	1	2	3	4	5
11.	1	2	3	4	5
12.	1	2	3	4	5
13.	1	2	3	4	5
14.	1	2	3	4	5
15.	1	2	3	4	5
16.	1	2	3	4	5
17.	1	2	3	4	5

Teacher Name _____

School _____

FRIENDSHIP NOMINATION

Name:_____

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.
15.
16.
17.
18.
19.
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21.
22.
23.
24.
25.
26.
27.
28.
29.
30.
31.
32.
33.
34.
35.
36.
37.
38.
39.
40.

I most like to play with:

1.

2.

3.

I least like to play with:

1.

2.

3.

MODIFIED PEERS OBSERVATION FORM

Name_____ School_____ Date_____

Grade_____ Teacher_____ Observer_____ Page_____

Recess: am( ) lunch( ) pm( ) other( ) Phase: Pre( ) Inter( ) Post( )

	1		2		3		4		5		6	
	NAPS	SAT	NAPS	SAT	NAPS	SAT	NAPS	SAT	NAPS	SAT	NAPS	SAT
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												

DAILY TOTALS

NEG....____	START...____
ALONE..____	ANSWER..____
POS/SOC.____	TALK....____

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APPENDIX B

ADDITIONAL TABLES

TABLE 25. Mean Gains Scores for Teachers on Each Measure (Positive scores depict an improvement on all measures)

Measure	Teacher Number (Experimental Group) 1	2	3	(Control Group) 4	5	6
Skills Check Resource Tch	1.25	.60	.67	.18	.54	-.31
Observations Obs1 to Obs3	37.49	-3.38	22.03	26.36	5.16	35.76
Observations Obs4 to Obs8	-.20	22.10	-.19	-27.68	-19.38	-.33
Observations Obs1 to Obs8	32.33	52.64	38.15	-.70	-.58	42.46
Peer Rating	.03	.38	-.01	-.44	-.22	-.20
Self-Esteem	-3.20	-1.40	4.00	0.00	-14.00	9.00
Walker Resource Tch	38.40	7.40	5.20	10.60	5.40	3.80
Walker Regular Tch	16.40	10.40	.04	4.20	2.80	4.80
Teacher Satisfaction	.02	.22	.64	.11	.40	-.34

TABLE 26. Mean Scores for Observation Sets by Teachers

Observation Number	Teacher Number (Experimental Group) 1	2	3	(Control Group) 4	5	6
1	24.33	26.98	42.53	40.40	41.94	47.30
2	36.10	66.27	55.29	26.28	65.86	66.38
3	61.82	23.60	64.56	66.70	47.10	83.06
4	56.86	57.52	80.87	67.38	67.74	90.09
5	49.96	61.86	59.51	82.64	42.27	84.49
6	48.26	46.81	58.71	85.23	67.30	78.82
7	51.67	78.42	63.86	85.09	32.02	60.45
8	56.66	79.62	80.68	39.70	41.36	89.76

APPENDIX C

SAMPLE UNIT: TEACHER TRAINING MANUAL

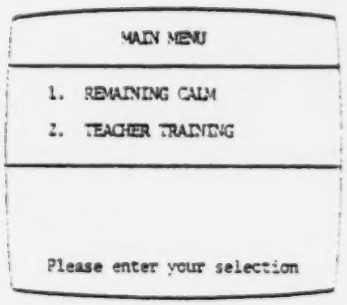
Unit 1 – Overview

This unit of the teacher tutorial is designed to explain the content of the Cooperative Interaction program and to show you how to use the program to teach social skills to your students.

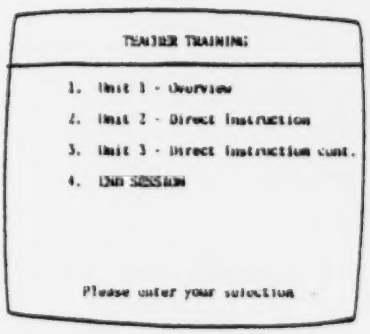
The videodisc player should be set up and ready to go. If not, refer to your **Reference Manual** for set up instructions.

To begin:

1. Press the POWER button.
2. Place the disc in the player so that Side 2 is facing you.
3. Press the PLAY button.
4. A menu listing the contents of Side 2 will appear. Press #2 for Teacher Training.



5. A second menu will appear. Press #1 to begin videodisc instruction on Unit One. Now follow the directions given on the videodisc.


TEACHER TRAINING
1. Unit 1 - Overview
2. Unit 2 - Direct Instruction
3. Unit 3 - Direct Instruction cont.
4. END SESSION
Please enter your selection

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COOPERATIVE INTERACTION TARGET SKILL DEFINITIONS

1. Getting Involved: Getting involved means getting started playing with others or helping others.
2. Being Involved: Being involved means doing something with someone else.
3. Ending Positively: Ending positively means stopping an activity at the right time in a nice way.
4. Being Positive: Being positive means saying nice things to others and being polite.
5. Remaining Calm: Remaining calm means behaving appropriately in unpleasant situations.

Press the GO ON key to see a demonstration of each of the skills.

Point System (Phase I)

Well-designed instructional materials implemented by a skilled teacher are critical to the success of social skills training, however, it is very likely that behavior management procedures will also be required to promote learning with handicapped students.

In this program additional intervention procedures are provided in the form of a "point system", i.e., a student earns points for demonstrating appropriate behaviors and the points are then exchanged for a variety of backup reinforcers. Phase I of the point system is designed to assist the student in the initial acquisition of the Cooperative Interaction target skills and to maintain behavior during instructional sessions. Phase I of the point system is used during the first twelve days of the program.

Press the GO ON key to see the point card used in Phase I.

"THINGS TO DO" (Phase I)

During the instructional sessions, the student is expected to obey the teacher, pay attention, work hard, follow classroom rules, and learn new skills.

Rules:

1. Points are awarded twice during each lesson (midway & end).
2. If the student demonstrated the behaviors listed under "THINGS TO DO" approxiately 75% of the time during the interval, circle the "+" on the card.
3. If the student failed to demonstrate the 75% level of appropriate behavior, the teacher should circle the "o".
4. Always provide verbal reinforcement with the points awarded.

Press GO ON to see how points should be awarded during the lesson.

"THINGS NOT TO DO" (Phase I)

The point card also includes a response cost component. The behaviors listed under "THINGS NOT TO DO" are as follows: disobey the teacher, disturb others, and talk out of turn.

Rules:

1. If the student engages in one of the "THINGS NOT TO DO" behaviors, mark a (√) in the space provided.
2. Do this immediately after the behavior is exhibited.
3. Immediately tell the student that a point has been subtracted.
4. Tell the student specifically what s/he did to warrant the deduction.

Press GO ON to see how you should deal with misbehavior during the lesson.

Creating the Reinforcer List (Phase I)

Steps:

1. Make a list of privileges, activities and items which are available in the school environment which may be exchanged for points.

2. Have students review your list adding desired privileges, activities, or items you have not included.

3. Ask the students to rate the items on the list (from most desired to least desired). Assign costs on the basis of those ratings.

4. Based on the information learned from the above steps create a **Reinforcer List** similar to the one shown below.

REINFORCER LIST

PRIVILEGE/ACTIVITY	POINTS NEEDED
ONE SPECIAL CLASSROOM TASK (I.E., CLEAN CHALK ERASERS STRAIGHTEN WORK AREAS, EMPTY WASTEBASKETS, CLEAN PET CAGES, OR WATER PLANTS, ETC.	10
ONE SPECIAL CLASS PRIVILEGE (I.E., COLLECT LUNCH TICKETS PASS OUT PAPERS, LINE LEADER, TEAM CAPTAIN, TAKING NOTES TO OFFICE OR RUNNING OTHER ERRANDS, ETC.	10
SPECIAL NOTE ABOUT STUDENT FOR (PRINCIPAL, TEACHER, PARENT)	9
LISTEN TO A RECORD OR WATCH A FILMSTRIP	8
PLAY A GAME OR PUT PUZZLE TOGETHER (ALONE OR WITH A FRIEND OR TEACHER)	7
FUN PAPER AND PENCIL ACTIVITY	6
SPECIAL STICKER	5
FREE TIME MINUTES (1/2 MINUTES PER POINT)	1 TO 10

Turn to page 5 of this manual.

Using the Reinforcer List to Exchange Points (Phase I)

Steps:

1. Points are exchanged each day at the end of the lesson.
2. Students may buy only one privilege, activity or item per day.
3. The student may exchange all or part of his/her earned points for any single item on the list.
4. Students may not save points from one session for use on a different day.

Press GO ON to see how you should exchange points following a lesson.

Critical Attributes

Instruction is aimed at teaching students the Cooperative Interaction target skills by focusing on three critical attributes of appropriate social behavior. These critical attributes are: 1) using an appropriate tone of voice 2) using appropriate words and 3) using appropriate body language. The program is designed to help students demonstrate these attributes appropriately as they interact with others.

Critical Attributes

1. Tone of Voice
2. Words
3. Body Language

Press GO ON and then select each example you would like to see.

Unit 1: Overview Checkout

1. List the five major areas within Cooperative Interaction covered in this social skills program.

   1.

   2.

   3.

   4.

   5.

2. There are five general behaviors for which a student can earn points in the Phase I point system. (THINGS TO DO). List them:

   1.

   2.

   3.

   4.

   5.

3. There are three general behaviors for which a student can have points taken away (THINGS NOT TO DO), what are they?

   1.

   2.

   3.

4. This program is designed to help the student discriminate three critical attributes of appropriate social interaction. What are they?

   1.

   2.

   3.

APPENDIX D

SAMPLE LESSON: DAILY LESSON GUIDE

DAY 2: Being Involved

1. Prepare for lesson
2. Introduce lesson
3. Review previous lessons
4. Introduce being involved
5. Conduct being involved discrimination training
6. Conduct being involved rehearsal sequence
7. Introduce combining skills
8. Conduct combining skills discrimination training
9. Conduct combining skills rehearsal sequence
10. View integration scene
11. Summarize lesson

Estimated session length: 45 minutes

1. Prepare for lesson

Before beginning this lesson of the Cooperative Interaction program you should:

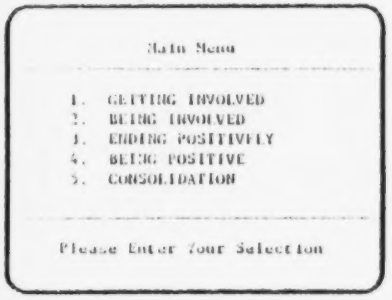
1. Read through the Daily Lesson Guide for today's lesson: Day 2: Being Involved.

2. Organize materials needed for today's lesson:
   a. Daily Lesson Guide
   b. Phase One point cards for students
   c. Reinforcer List
   d. Reinforcers

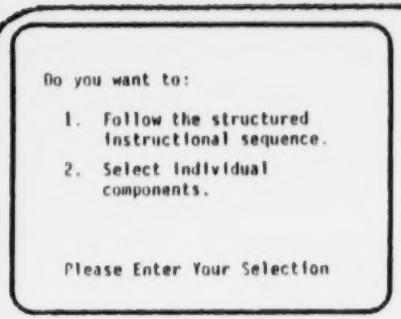
3. Check equipment.

4. Arrange seating.

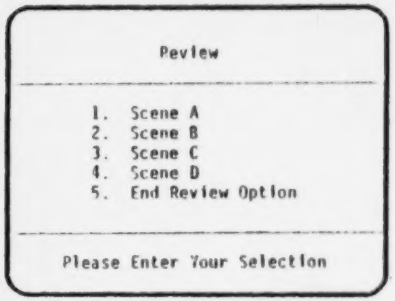
5. Just before the students arrive you should:
   a. Turn on the television and videodisc player.
   b. Place the disc in the player so that Side 1 is facing you.
   c. Press the PLAY button.



← A menu listing the contents of Side 1 will appear. Press #2 for Being Involved.


Do you want to:
1. Follow the structured instructional sequence.
2. Select individual components.
Please Enter Your Selection

← A second menu will appear. Press #1 to follow the structured instructional sequence.



← A third screen will appear. The videodisc will pause at this point.

6. You are now ready to begin today's lesson.

Remember to praise often!
Correct and prompt when necessary.

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2. Introduce lesson

1. Greet students.

TEACHER: Welcome to class today.

2. Distribute point cards.

TEACHER: Here's your point card for today's lesson.

Hand a Phase One point card to each student.

TEACHER: Write your name at the top of the card. Remember, to earn points you need to use your best behavior while we're working.

Let's begin today's work on Cooperative Interaction.

3. Review previous lessons

1. Select review option(s).

   Select any option or combination of options listed below. Follow the steps for each option as outlined in the Reference Manual.

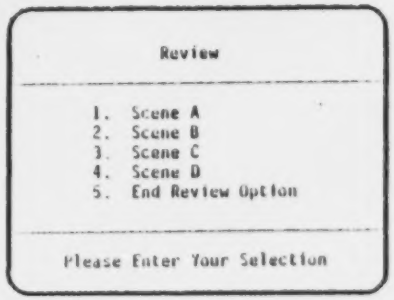
   OPTION I Discuss Cooperative Interaction skills without viewing scenes.
   OPTION II View scene(s) and discuss Cooperative Interaction skills.
   OPTION III View scene(s) then imitate and rehearse the scene(s).
   OPTION IV Skip the review of previous lessons.

2. Begin Instruction (Use this step for OPTIONS I, II, and III).

   TEACHER: During our last lesson we learned about Getting Involved.

   Let's review.

   If following OPTION I: Discuss the Cooperative Interaction skills at this time without viewing the scenes on the videodisc.
   If following OPTION II: Begin work on the videodisc (see next page).
   If following OPTION III: Begin work on the videodisc (see next page).



3. Begin work on videodisc (Use this step for OPTIONS II and III).

←—You should be at this screen. Enter your selection. The videodisc will play the scene you select and then pause.

SCENE A: Situation: Peer carrying boxes - Getting Involved
Target kid: Matt
Behavior: appropriate
Cirtical attribute: words

SCENE B: Situation: Rolling up volleyball net - Getting Involved
Target kid: Jason
Behavior: appropriate
Critical attribute: tone of voice

SCENE C: Situation: Kids working on bicycle - Getting Involved
Target kid: Jason
Behavior: appropriate
Critical attribute: words

SCENE D: Situation: Making paper airplanes - Getting Involved
Target kid: Jason
Behavior: appropriate
Critical attribute: tone of voice

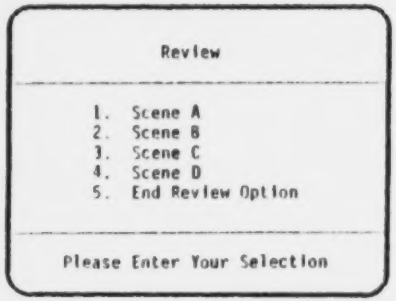
Press the GO ON key.

153

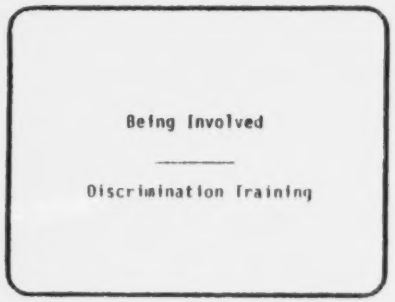
152

The videodisc will return to the review menu. Enter your next selection.

4. End review (Use this step for OPTIONS I, II, III, and IV).



←——You should be at this screen. Enter selection #5 to go on.



←——This is the next screen. The videodisc will pause at this point.

4. Introduce being involved

1. Begin Instruction

TEACHER: During our last lesson we learned about Getting Involved. Today we're going to learn about Being Involved. What are we going to learn about?

STUDENT(S): Being Involved

TEACHER: Being Involved means doing something with someone else. What does Being Involved mean?

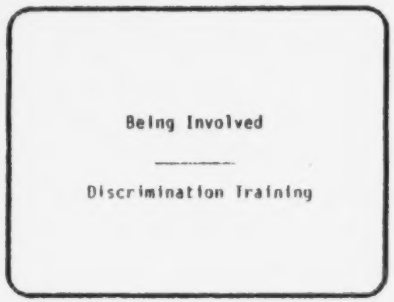
STUDENT(S): Doing something with someone else.

TEACHER: Remember, to be involved the right way it is important to use the right tone of voice, the right words and the right body language.

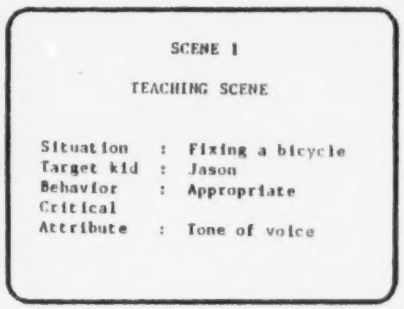
5. Conduct being involved discrimination training

1. Begin work on videodisc: Teaching Scenes

TEACHER: Let's watch some scenes on the television that show kids trying to be involved.



← You should be at this screen. Press the GO ON key.



← The videodisc will play SCENE 1 and then pause.

TEACHER: That was an example of Being Involved. How do I know? Because Jason used a special skill. He used the right tone of voice. His voice sounded friendly as he asked Jack to hand him the screwdriver.

153

159

SCENE 2

TEACHING SCENE

Situation : Fixing a bicycle
Target kid : Jason
Behavior : Inappropriate
Critical
Attribute : Tone of voice

Press the GO ON key.

← The videodisc will play SCENE 2 and then pause.

TEACHER: That was not an example of Being Involved. How do I know? Because Jason used the wrong tone of voice. His voice sounded angry and bossy.

SCENE 3

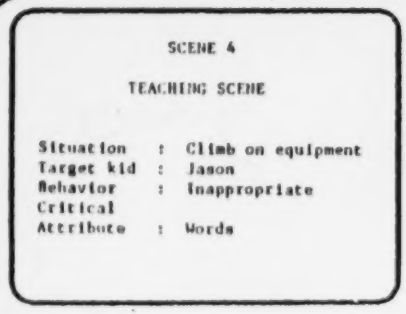
TEACHING SCENE

Situation : Watching television
Target kid : Matt
Behavior : Inappropriate
Critical
Attribute : Body language

Press the GO ON key.

← The videodisc will play SCENE 3 and then pause.

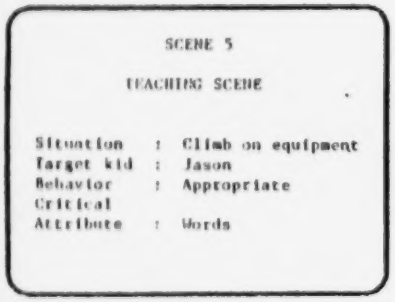
TEACHER: That was not an example of Being Involved. How do I know? Because Matt used the wrong body language. He pushed his sister's head with his foot and threw a pillow at his brother.



Press the GO ON key.

The videodisc will play SCENE 4 and then pause.

TEACHER: That was not an example of Being Involved. How do I know? Because Jason used the wrong words. He did not talk in a nice way to the other kids. He told Jack to get down. He told David to get out of there because he was too slow.



Press the GO ON key.

The videodisc will play SCENE 5 and then pause.

TEACHER: That was an example of Being Involved. How do I know? Because Jason used a special skill. He used the right words. He talked in a nice way to the other kids. He asked Jack how he had climbed so fast. He invited David to climb with him.

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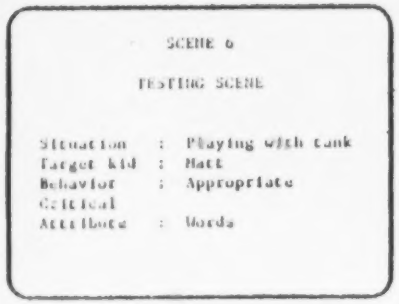
2. Continue work on the videodisc: Testing Scenes

TEACHER: Watch the next scenes carefully because you will be asked to answer some questions about them.



Press the GO ON key.

← The videodisc will play SCENE 6 and then pause.

TEACHER: Was that an example of Being Involved?

STUDENT: Yes

TEACHER: How do you know?

STUDENT: Because he used the right words. He said the tank was great. He thought it was neat. He asked in a nice way if the tank could go in a circle. (accept any comparable answer)

SCENE 7

TESTING SCENE

Situation : Standing in line
Target kid : Jason
Behavior : Inappropriate
Critical
Attribute : Body language

Press the GO ON key.

The videodisc will play SCENE 7 and then pause.

TEACHER: Was that an example of Being Involved?

STUDENT: No

TEACHER: How do you know?

STUDENT: Because he used the wrong body language. He pushed the girl, pulled her hair and poked her. (accept any comparable answer)

SCENE 8

TESTING SCENE

Situation : Work on assignment
Target kid : Jason
Behavior : Appropriate
Critical
Attribute : Tone of voice

Press the GO ON key.

← The videodisc will play SCENE 8 and then pause.

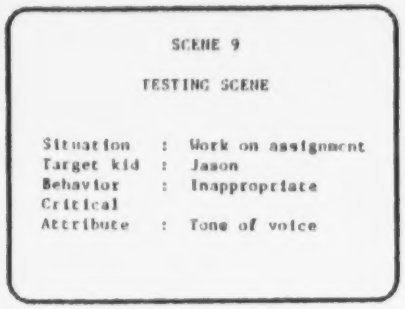
TEACHER: Was that an example of Being Involved?

STUDENT: Yes

TEACHER: How do you know?

STUDENT: Because he used the right tone of voice. His voice sounded excited. He really sounded interested in their work. (accept any comparable answer)

183



Press the GO ON key.

The videodisc will play SCENE 9 and then pause.

TEACHER: Was that an example of Being Involved?

STUDENT: No

TEACHER: How do you know?

STUDENT: Because he used the wrong tone of voice. His voice sounded like he was bragging and putting down the other kids. (accept any comparable answer)

170

171

SCENE 10

TESTING SCENE

Situation : Play card game
Target kid : Matt
Behavior : Inappropriate
Critical Attribute : Body language

Press the GO ON key.

← The videodisc will play SCENE 10 and then pause.

TEACHER: Was that an example of Being Involved?

STUDENT: No

TEACHER: How do you know?

STUDENT: Because he used the wrong body language. He leaned over and looked at the other kid's cards. (accept any comparable answer)

SCENE 11

TESTING SCENE

Situation : Stand in bus line
Target kid : Jason
Behavior : Inappropriate
Critical
Attribute : Body language

Press the GO ON key.

← The videodisc will play SCENE 11 and then pause.

TEACHER: Was that an example of Being Involved?

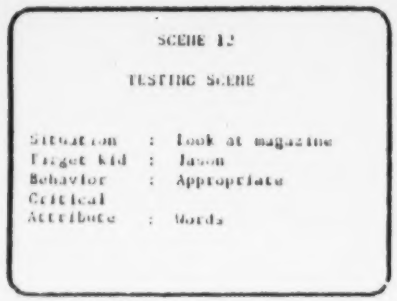
STUDENT: No

TEACHER: How do you know?

STUDENT: Because he used the wrong body language. He grabbed the kid's gym bag and tried to keep it away from him. (accept any comparable answer)

174

175



Press the GO ON key.

← The videodisc will play SCENE 12 and then pause.

TEACHER: Was that an example of Being Involved?

STUDENT: Yes

TEACHER: How do you know?

STUDENT: Because he used the right words. His words were positive. He talked about the things he saw in the magazine. (accept any comparable answer)

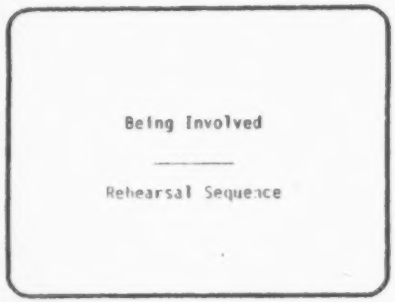
Press the GO ON key.

← This is the next screen. The videodisc will pause at this point.

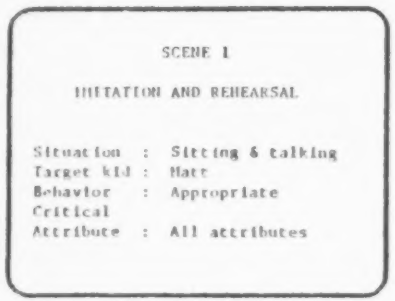
6. Conduct being involved rehearsal sequence

1. Begin work on the videodisc.

TEACHER: Now we'll watch two scenes that you will try to act out yourselves. Get ready for the first scene. Watch carefully what Matt is doing in the scene.



← You should be at this screen. Press the GO ON key.



← The videodisc will play the first imitation and rehearsal scene and then pause.

TEACHER: In this scene Matt was trying to be involved. He did it the right way by using the special skills. He used the right tone of voice, the right words and the right body language.

2. Model the imitation process for students (only if necessary).

TEACHER: Watch while I imitate what Matt did in the scene.

Follow the steps for modeling the imitation process as outlined in the Reference Manual.

After modeling the imitation process discuss with students what Matt did. Explain how Matt was trying to be involved and how he used the right tone of voice, words and body language.

5. Help students imitate the scene.

TEACHER: I would like ___ student's name ___ to imitate what Matt did in the scene.

Follow the steps for helping students imitate the scene as outlined in the Reference Manual.

4. Model the rehearsal process for students (only if necessary).

TEACHER: Watch while I rehearse what Matt did in the scene. I will do everything he did in the scene, only this time I will use my own tone of voice, words and body language.

Follow the steps for modeling the rehearsal process as outlined in the Reference Manual.

After modeling the rehearsal process discuss with students what you did. Explain how you were trying to be involved and how you used the right tone of voice, words and body language.

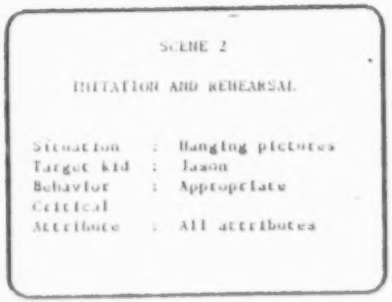
5. Help students rehearse the scene.

TEACHER: I would like student's name **to rehearse what Matt did in the scene. Remember, you should do everything he did in the scene, only this time use your own tone of voice, words and body language.**

Follow the steps for helping students rehearse the scene as outlined in the Reference Manual.

6. Continue work on the videodisc.

TEACHER: Get ready for the second scene. Watch carefully what Jason is doing in the scene.



Press the GO ON key.

← The videodisc will play the second imitation and rehearsal scene and then pause.

TEACHER: In this scene Jason was trying to be involved. He did it the right way by using the special skills. He used the right tone of voice, the right words and the right body language.

7. Model the imitation process for students (only if necessary).

TEACHER: Watch while I imitate what Jason did in the scene.

Follow the steps for modeling the imitation process as outlined in the Reference Manual.

After modeling the imitation process discuss with students what Jason did. Explain how Jason was trying to be involved and how he used the right tone of voice, words and body language.

8. Help students imitate the scene.

TEACHER: I would like ____student's name____ to imitate what Jason did in the scene.

Follow the steps for helping students imitate the scene as outlined in the Reference Manual.

9. Model the rehearsal process for students (only if necessary).

TEACHER: Watch while I rehearse what Jason did in the scene. I will do everything he did in the scene, only this time I will use my own tone of voice, words and body language.

Follow the steps for modeling the rehearsal process as outlined in the Reference Manual.

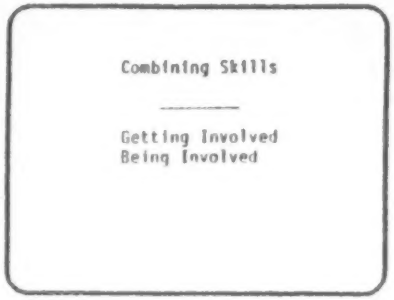
After modeling the rehearsal process discuss with students what you did. Explain how you were trying to be involved and how you used the right tone of voice, words and body language.

10. Help students rehearse the scene.

TEACHER: I would like____student's name____ to rehearse what Jason did in the scene. Remember, you should do everything he did in the scene, only this time use your own tone of voice, words and body language.

Follow the steps for helping students rehearse the scene as outlined in the Reference Manual.

Press the GO ON key.



← This is the next screen. The videodisc will pause at this point.

11. Mark point cards and provide feedback.

TEACHER: It's time to mark point cards.

Follow the steps for marking Phase One point cards as outlined in the Reference Manual.

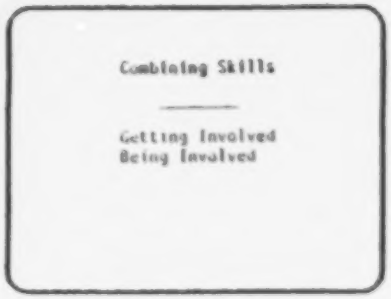
190

191

7. Introduce combining skills

1. Begin Instruction

TEACHER : During our last lesson, we learned about Getting Involved. Today we learned about Being Involved.



← You should be at this screen.

Point to the information on the screen.

TEACHER: Now let's practice combining skills. Let's put Getting Involved and Being Involved together. When we combine these skills we can just call them Cooperative Interaction.

Press the GO ON key.

← This is the next screen. The videodisc will pause at this point.

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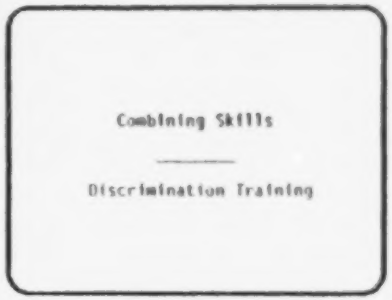
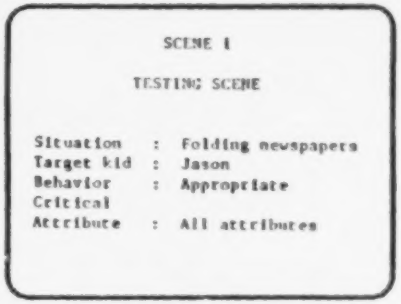
8. Conduct combining skills discrimination training

1. Begin work on the videodisc: Testing Scenes

TEACHER: Let's watch some scenes on the television that show kids trying to combine skills. Watch the scenes carefully because you will be asked to answer some questions about them.



← You should be at this screen. Press the GO ON key.



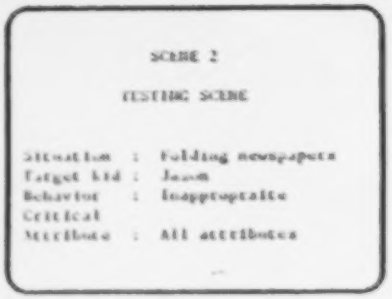
← The videodisc will play SCENE 1 and then pause.

TEACHER: Was that an example of Cooperative Interaction?

STUDENT: Yes

TEACHER: How do you know?

STUDENT: [Student must identify at least one of the critical attributes and state appropriate reason(s) for that choice.]



Press the GO ON key.

← The videodisc will play SCENE 2 and then pause.

TEACHER: Was that an example of Cooperative Interaction?

STUDENT: No

TEACHER: How do you know?

STUDENT: [Student must identify at least one of the critical attributes and state appropriate reason(s) for that choice.]

SCENE 3

TESTING SCENE

Situation : Sit on stairs
Target kid : Jason
Behavior : Appropriate
Critical
Attribute : All attributes

Press the GO ON key.

← The videodisc will play SCENE 3 and then pause.

TEACHER: Was that an example of Cooperative Interaction?

STUDENT: Yes

TEACHER: How do you know?

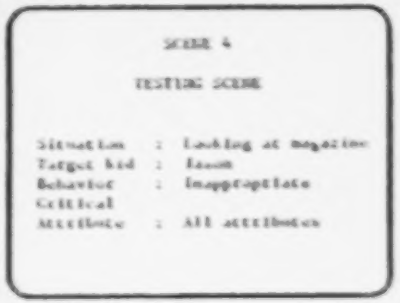
STUDENT: [Student must identify at least one of the critical attributes and state appropriate reason(s) for that choice.]

19-

199

145

2-29



Press the CD ON key.

← The videodisc will play SCENE 4 and then pause.

TEACHER: Was that an example of Cooperative Interaction?

STUDENT: No

TEACHER: How do you know?

STUDENT: [Student must identify at least one of the critical attributes and state appropriate reason(s) for that choice.]

SCENE 5

TESTING SCENE

Situation : Cleaning pet cage
Target kid : Matt
Behavior : Inappropriate
Critical Attribute : All attributes

Press the GO ON key.

← The videodisc will play SCENE 5 and then pause.

TEACHER: Was that an example of Cooperative Interaction?

STUDENT: No

TEACHER: How do you know?

STUDENT: [Student must identify at least one of the critical attributes and state appropriate reason(s) for that choice.]

Combining Skills

Rehearsal Sequence

202

Press the GO ON key.

← This is the next screen. The videodisc will pause at this point.

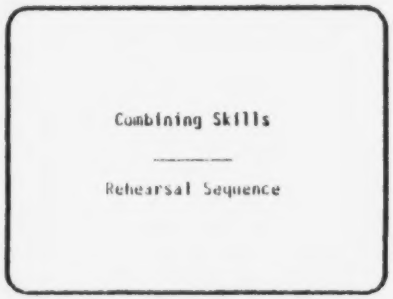
203

146

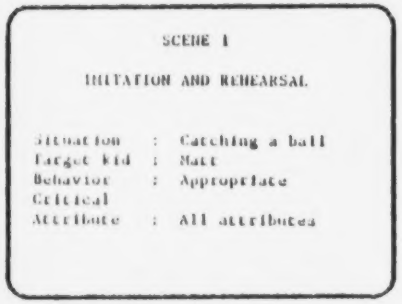
9. Conduct combining skills rehearsal sequence

1. Begin work on the videodisc.

TEACHER: Now we'll watch two scenes that you will try to act out yourselves. Get ready for the first scene. Watch carefully what Matt is doing in the scene.



← You should be at this screen. Press the GO ON key.



← The videodisc will play the first imitation and rehearsal scene and then pause.

TEACHER: In this scene Matt was trying to get involved and be involved. He did it the right way by using the special skills. He used the right tone of voice, the right words and the right body language.

2. Model the imitation process for students (only if necessary).

TEACHER: Watch while I imitate what Matt did in the scene.

Follow the steps for modeling the imitation process as outlined in the Reference Manual.

After modeling the imitation process discuss with students what Matt did. Explain how Matt combined skills and how he used the right tone of voice, words and body language.

3. Help students imitate the scene.

TEACHER: I would like ___student's name___ to imitate what Matt did in the scene.

Follow the steps for helping students imitate the scene as outlined in the Reference Manual.

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4. Model the rehearsal process for students (only if necessary).

TEACHER: Watch while I rehearse what Matt did in the scene. I will do everything he did in the scene, only this time I will use my own tone of voice, words and body language.

Follow the steps for modeling the rehearsal process as outlined in the Reference Manual.

After modeling the rehearsal process discuss with students what you did. Explain how you combined skills and how you used the right tone of voice, words and body language.

5. Help students rehearse the scene.

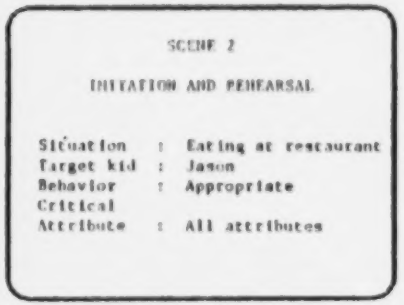
TEACHER: I would like ____student's name____ to rehearse what Matt did in the scene. Remember, you should do everything he did in the scene, only this time use your own tone of voice, words and body language.

209

Follow the steps for helping students rehearse the scene as outlined in the Reference Manual.

6. Continue work on the videodisc.

TEACHER: Get ready for the second scene. Watch carefully what Jason is doing in the scene.



Press the GO (R) key.

The videodisc will play the second imitation and rehearsal scene and then pause.

TEACHER: In this scene Jason was trying to get involved and be involved. He did it the right way by using the special skills. He used the right tone of voice, the right words and the right body language.

7. Model the imitation process for students (only if necessary).

TEACHER: Watch while I imitate what Jason did in the scene.

Follow the steps for modeling the imitation process as outlined in the Reference Manual.

After modeling the imitation process discuss with students what Jason did. Explain how Jason combined skills and how he used the right tone of voice, words and body language.

8. Help students imitate the scene.

TEACHER: I would like _____ Student's Name _____ to imitate what Jason did in the scene.

Follow the steps for helping students imitate the scene as outlined in the Reference Manual.

9. Model the rehearsal process for students (only if necessary).

TEACHER: Watch while I rehearse what Jason did in the scene. I will do everything he did in the scene, only this time I will use my own tone of voice, words and body language.

Follow the steps for modeling the rehearsal process as outlined in the Reference Manual.

After modeling the rehearsal process discuss with students what you did. Explain how you combined skills and how you used the right tone of voice, words and body language.

10. Help students rehearse the scene.

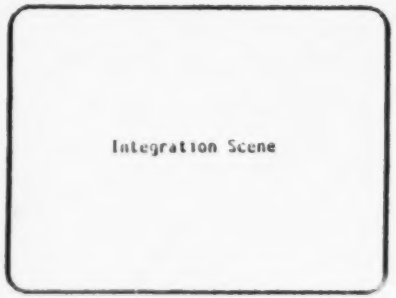
TEACHER: I would like student's name **to rehearse what Jason did in the scene. Remember, you should do everything he did in the scene, only this time use your own tone of voice, words and body language.**

214

Follow the steps for helping students rehearse the scene as outlined in the Reference Manual.

215

Press the GO ON key.



← This is the next screen. The videodisc will pause at this point.

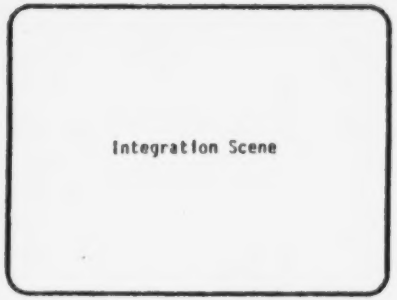
216

217

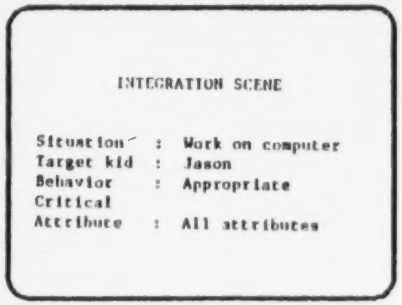
10. View integration scene

1. Begin Instruction.

TEACHER: The next scene that you will watch is a good example of Cooperative Interaction. You will see Jason trying to get along with others by Getting Involved, Being Involved, Ending Positively and Being Positive. He will be using the right tone of voice, words and body language. Watch carefully.



← You should be at this screen. Press the GO ON key.



← The videodisc will play the integration scene and then pause.

TEACHER: In this scene, Jason got involved by asking Lisa for help. He asked in a nice friendly way. He listened carefully and followed Lisa's suggestions. Then he thanked her for help before turning to work on the computer again.

2. Review Information.

TEACHER: What does Cooperative Interaction mean?

STUDENT(S): Getting along with others.

TEACHER: What are some of the ways to get along with others?

STUDENT(S): Getting Involved, Being Involved, Ending Positively and Being Positive.

TEACHER: And what are the special skills that will help you get along with others in the right way?

STUDENT(S): Using the right tone of voice, the right words and the right body language.

END SESSION

Press the GO ON key.

← This is the next screen. The videodisc will pause at this point.

11. Summarize lesson

1. Summarize lesson.

TEACHER: We have completed today's work on Cooperative Interaction. We learned about Being Involved. What did we learn about?

STUDENT(S): Being Involved

TEACHER: We also practiced combining skills. We combined Getting Involved and Being Involved.

2. Mark point cards and provide feedback.

TEACHER: It's time to mark point cards again.

Follow the steps for marking Phase One point cards as outlined in the Reference Manual.

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3. Students exchange points for reinforcers.

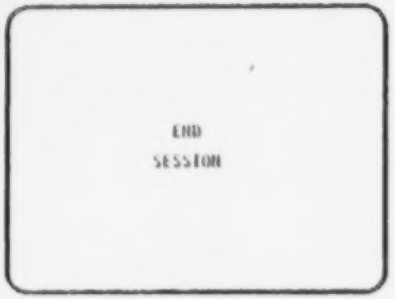
TEACHER: Now you can trade your points for something from the list. Look at the list and tell me what you would like to buy with your points.

Follow the steps for exchanging points as outlined in the Reference Manual.

4. End Lesson.

TEACHER: We will meet again day, time and location .

You have now completed today's lesson.



← You should be at this screen. Press the GO ON key.

← This is the next screen. If you are using a Level II system, press the reject button, then turn off the television and videodisc player. If you are using a Level III system, turn off the computer, television and videodisc player.

APPENDIX E

PHASE I AND PHASE II POINT CARDS

PHASE I POINT CARD

THINGS TO DO:

- Obey the Teacher
- Pay Attention
- Work Hard
- Follow Classroom Rules
- Learn New Skills

+ 0	+ 0
+ 0	+ 0
+ 0	+ 0
+ 0	+ 0
+ 0	+ 0

THINGS NOT TO DO:

- Disobey the Teacher
- Disturb Others
- Talk Out of Turn

comments:

_____	−	_____	=	_____
Total +		Total ✓		Net Total

PHASE II POINT CARD

THINGS TO DO

General Rating of Student Behavior

Bonus _____ Poor 1 2 3 4 5 Excellent

THINGS NOT TO DO

1. Verbal Aggression
2. Physical Aggression
3. Disobey the Teacher

MATCHING (circle one)

Perfect Match + 3 Bonus

Next Door Match

No Match Zero Points For Day

SCORE CALCULATION

_____ + _____ = _____ - _____ = _____

Things To Do Points (1-5) | Perfect Match Bonus (+3) | Points Earned Sub Total | Total ✓ | Net Total

APPENDIX F

LEVELS OF VIDEODISC APPLICATION

Controlling the Videodisk Player

There are a number of options for controlling or operating a videodisk player. They are typically referred to as levels of interactivity and are described as follows:

Level 1 - The videodisk player is controlled manually with a remote control device. This device has function keys for each of the player's operations. For example, to search for a particular frame on the disk, the operator enters the frame number on the remote control device and pushes the search key to initiate the search. After finding the desired frame, the operator has numerous options such as forward or reverse play, single frame display, slow motion play or regular play with or without audio from either or both of the audio tracks. All of these functions are accessible with the remote control device.

Level 2 - Some educational/industrial models such as the Sony and the Pioneer 7820 have built-in microprocessors. All Level 1 functions can be controlled by this microprocessor. The computer program that determines the control is stored on the videodisk and then loaded from the disk into the microprocessor. The flow of the presentation is controlled by the logic in the computer program and by input from a user with the remote control device.

Level 3 - The videodisk player is interfaced with an external computer. The logic of the presentation is determined by the computer program in the external computer, and by input from the user, usually entered through the computer's keyboard. This is advantageous because the computer can supply text and graphics in addition to the still frames and motion supplied by the videodisk. Additionally, student progress data can be collected and stored on an external storage device such as a floppy disk.

Excert taken from:

Thorkildsen, R. & Friedman, S. (1984). Videodisks in the classroom. Technical Horizons in Education Journal, 11 (7), 90-95.